DISSERTATION THESIS

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TECHNOLOGY PARKS AND MUSEUMS: INDUSTRIAL TOURISM IN SOCIETY AND ECONOMY OF PTOLEMAIDA

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1. Introduction

Accomplishing this master's dissertation thesis is just the author's aspiration to highlight the Industrial Heritage park concept as a major catalyst and regulator of financial uplift in the wider area of Ptolemaida – Eordaia. It can prove a useful "tool" for the local economy and society since it will signify the development of notable business activities of touristic and educational nature. To put it simply this venture should become among the economic pillars of the region in the form of industrial tourism; heavy industry and abandoned buildings/equipment. That is if it is realized in reasonable timeframe and execution style. Our research includes the following academic questions:

- How can we accomplish the Industrial Heritage project in Ptolemaida? Which stakeholders and how many people can be involved?
- Where is it possible to make this Technology and Industry park project?
- What is it going to accomplish in the long run?

We questioned several people inside these industries and gathered valuable information about the prospect of such a plan. We also looked up on several conferences, meetings, organized actions in and around Ptolemaida that focused on the issue of preserving and promoting old facilities and non-functioning infrastructures. By combining this chronicle of events and discussing the issue with some persons of interest we shall reach to a plausible suggestion for the future of this area.

Great source of inspiration for this project was the Proposal for Promotion of the AEVAL Industrial Heritage (Jessica prototype) by Konstantinos Nikou on 19/11/2011 during the Symposium of Technical Chamber (TEE). He suggested a completely feasible plan, with photorealistic designs, top view plans and time schedules, realistic models including the outside and inside spaces of the AEVAL facilities. It basically shows how Ptolemaida can benefit from the creation of Museums and Educational places that will attract tourists and visitors eager to learn.

The project is split into two parts:

- In the first part there is basic data provided about Science parks and the conditions of creating those.

- In the second part there is a detailed analysis of the Ptolemaida Industrial Park planning (S.E.S. Ptolemaida - ΑΗΣ Πτολεμαΐδας). Furthermore, in this part some interviews given by PPC (Public Power Corporation – in greek Δ.Ε.Η.) employees and executives are presented.

Part A

2. General Information on Museums

According to the International Council of Museums, a Museum generally speaking is "an institution permanent, non-profitable, at the service of community and its evolution, open to public, it conducts research, acquires, preserves, notifies and mostly puts in display the material evidence of the men and their environment, in order to study, educate and entertain" (Michailidou, 2002: 93). In the last couple of years, it is more and more discussed that the role of Museums should be redefined towards the direction of communicating ideas and knowledge, instead of solely preserving elements of cultural heritage (Murphy, 2004).

We observe two main development stages of such institutions […] (Anyfanti, 2009). The first stage is shown as a specialized form and it is exhibited to non experts with the aim of eliciting their admiration. The "correctness" and "validity" of exhibited knowledge is maintained with two ways (Nakou, 2001):

a. through the classification of exhibits based on the inside scientific logic and

b. through the meaningfulness of exhibited objects as a proof of scientific laws standing accurate.

The second stage of Museums (which are now upgraded into Science centres) is characterized by the projection of Science as a knowledge carrier, whose methodology and logic is of higher value. On the other hand, the acquiring of this methodology and logic demands an active engagement of non-special visitors with interactive exhibits. Simultaneously, apart from the active discovering of this knowledge, there is a promotion effort by the Museum of its broader social consequences (Dimopoulos, 2006).

3. Differentiating elements of a traditional Natural Sciences and Technology Museum versus a modern interactive Scientific Facility

First stage Museums (traditional museological approach):

- Objects collection based on classification principles of the relevant scientific field.
- The visitor as a mere viewer of exhibits.
- Science and Technology are presented as separated from other fields of human activity.
- The Museum as academic institute (temple of Science and Technology).

Second stage Museums – Scientific centres (modern museological approach):

- Experimental agendas of understanding scientific fenomena.
- Visitor controls and interacts with exhibits (interactive exhibits).
- Science and Technology are shown as areas which interact with other fields of human activity.
- The aim is understanding the principles of Science and Technology and development of mature scepticism on their achievements.

Kolliopoulos (2005) claims that all the above institutes are places of scientific and technological cultivation. They address to a non-specialised audience interested in learning and discovering new objects, facts and ideas.

Based on the above analysis and depending on their theme expertise, Museums are classified into these categories:

- Natural History Museums (content relevant with flora and fauna of regions, fossils etc.)
- Natural Sciences Museums (content relevant with the fields of Physics, Chemistry, Astronomy, Biology, Medicine, Mineralogy, Paleontology, Geology)
- Technology Museums (content relevant with technological applications like miner parks, Railroad Museums, Telecommunications Museums etc.)

- Industrial Museums (the epicentre is industrial process of products, with the examples of Olive and Wine Museums, Silk and Honey, Hydrokinesis Museum or industrial sites open to the public)
- Aquariums, Zoo Parks and Botanic Parks

In Greece, museums were always on the spotlight due to the intense interest for Classic Antiquity and Byzantium. On the past few decades, something seems to have changed for the better. Greek society has been There are extended modernization procedures of Greek society by means of its integration in the E.U. and the connection of our country with modern scientifict-technological realities alongside with a parallel adoption of rational standards. These standards operate with a notion that Science and Technology are driving forces for social and financial growth. So, interest has taken a turn for other kinds of museums, such as Natural Sciences and Technology, even though our country has delayed its path to the new trend, compared to other European countries (Callon, 2004).

Greece appears, even with a delay, to be affected by this trend for a modern form of Science Museums mostly in the big urban centres (Athens, Thessaloniki, Heraklium, Patra), where some modern interactive science centers are established. Within this secondary effort, Museums are established; everyday workplaces (factories, olive press units, Hydrokinesis Museums) that appear more hospitable and less institutional to the visitor's eye.

Industrial museums and technology museums are hard to find, a fact which reflects on the minor technological and industrial heritage of the country, as probably mentioned earlier. If it were not for the network of Prefectural Museums of preserving the local industrial heritage of Peiraus Bank (former ETBA), this category would be almost non-existent in Greece. It is interesting to regard the fact that Museums of this category exist in every prefecture, which reflects on the close connection of these Museums and the local industrial and small industry heritage.
Despite Greece's small tradition in Natural Sciences and Technology Museums, the last two decades we observe a systematic and fast spread (doubling each decade) of this kind of Museums in every prefecture of the country. It is a remarkable that seven out of ten relevant Museums have been established after 1990, however without

incorporating modern museological approaches according to which emphasis is given to experiential engagement of the visitor and his interaction with the exhibits. In their majority the relevant museums still remain attached to the museological "example" of Museums as preservation arcs and simple exhibitions of natural, scientific and technological heritage.

As a result after the first stage of rapid growth on such Museums, maybe it is time for initiatives to be taken, to enable co-operations and synergies that will allow museums to operate as a united network, maximizing the benefits and advantages that their operation offers to tertiarty education and society.

We estimate that a few steps may benefit towards such a direction, such as:

- The digitalization of collections of all Museums with common standards, in order to construct a larger repository of materials publicly available and not only among Museums and educational material for a typical educational system (pooling of resources).
- Encouragement of taking common initiatives from relevant Museums, at first in a prefectural and secondly in a national level, to enable co-operation among themselves and with other cultural or educational stakeholders. This co-operation should lead to organized actions, minimizing the cost.
- Possible merges of Museums under public guidance or local Government guidance, to increase the small capacity Museums' business capabilities. Due to large percentage of Museums in this category already belonging to Universities, the relevant initiative could be taken by them.
- Incorporation of Natural Sciences and Technology Museums, as is the case with similar History and Archaeology Museums, in the tourism planning of the country could be a major attraction pole for thousands of tourists, thus adding a competitive advantage to these areas.

4. Science Parks

On the other hand, Science Parks are organizations that aim at scientific research and growth of entrepreneurship. There are a lot of synonym definitions for Science Parks (S.P.). The role of S.P. is to provide a decisive environment of "incubation", which is

necessary to transform basic science of the Universities into commercially viable innovations (Hansson et al, 2005).

According to International Association of Science Parks (IASP), the official definition is this: "A Science Park is an organization which is managed by specialized professionals, whose main goal is the growth of wealth for its community, with the promotion of the innovation culture and competitiveness of collaborating businesses and research institutes To be able to fulfill these goals, S.P. stimulates and manages the flow of knowledge and technology between universities, research institutes, companies and the market. It facilitates the making and growth of innovative businesses via incubation and subsequent processes and provides other value-added services in combination with high quality of the accommodation and facilities." (IASP, http://www.iasp.ws).

From a research of theirs on the S.P. of the United States of America, Link & Scott (2002) mention that they should fulfill the below conditions:

a. an estate property,

b. an organized activity plan of transferring technology and

c. collaboration terms with academic institutes, the government and the private sector.

S.P. are consolidated with two major goals (Felsenstein, 1994). The first goal develops the evolution and growth of new, small hi-tec businesses, facilitating the transfer of university expertise to hired businesses and encouraging the development of innovative products and procedures. The second goal is the role of catalyst for prefectural economic growth.

5. Technology Parks of Greece:

The first Science and Technology Parks created in Greece were thanks to an initiative of the Foundation for Research & Technology (*in Greek* - Ίδρυμα Τεχνολογίας και Έρευνας *abb*. I.T.E.), one of the biggest Research Foundations in the country. In chronological order the Science and Technology Parks of Greeks are these:

- Science and Technology Park of Crete
- Science Park of Patras

- Science Park of Thessaloniki
- Technology Park “Lefkippos”
- Lavrion Technological and Cultural Park
- Technological Park of Thessaly
- Science and Technology Park of Epirus.

Science and technological parks in Greece have changed their ownership and administrative status during the last 15 years, because there is a gradual turn of Universities and research centers towards the private sector. This gradual change has created a variety of models, through which there is hope that more successful and innovative businesses will arise in comparison to the recent past (Sofouli & Vonortas, 2006).

According to Bakouros et al (2002), S.P. in Greece differentiate themselves in several points in comparison to more advanced European countries. The purpose of their research is evaluating the role of technology parks in order to promote technology, by means of co-operation of local Universities and businesses.

6. Conditions and Importance of Technology Parks

According to Cabral (1998) to consider an organization as an S.P. it must comply with the below conditions:

- It has access to trained staff in research and development of those knowledge fields that the park is associated with.
- It belongs to a society that allows protection of classified products or procedures, by means of patents, security or any other means.
- It is able to choose or reject companies that insert themselves in the Park. The business plan of the company must be relevant with the identity of the S.P.
- It has a clear identity, often expressed symbolically, with the choice of name for the Park, its logo or an administrative text.
- It includes a major percentage of company counselors, and also services of technical companies, such as laboratories and quality control companies. […]

Castells and Hall (1994) stress out that there are three basic incentives for creating Science Parks:

a. reindustrialization

b. local development

c. creation of synergies.

The first two incentives are clearly understood, because they negotiate the development of technology and local or urban renewal, respectively. Nevertheless, the third incentive is less understood (Phillimore 1997).

Gower & Harris (1996) drafted a list with ten most important benefits coming up from science parks in Great Britain, according to the answers received by chief executives and administrative staff of the parks.

- Opening new job positions for the science park.
- Creating extra employment in a local level.
- Development of bonds between Universities and Industry.
- Promotion of local society as a development area.
- Providing financial performances to private investors.
- Providing financial support to Universities, Foundations of Tertiary Education or research centers.
- Providing of low-cost operations to the hosted businesses of the park.
- Transforming the traditional industry into a modern, "clean" industry.
- Providing financial performance index to local authorities and development services.
- Restructure of abandoned lands and buildings.

Taking into consideration the reason why a region has an S.P., one may observe, that it operates as a catalyst for:

Financial change

- Local creation of businesses of high added value.
- Maintaining/attracting employees with flexible, high-value knowledge.

Rebirth

- Premature approval for preparing the stage.
- Visitors who exercise influence and understand the prospects.
- The role of S.P. in business development. (http://www.ukspa.org.uk/)

7. The role of Science Parks in academic research, innovation and prefectural development

Universities look out for external research collaborations in an effort to enrich their research base as much as their financial value of knowledge. Link and Scott (2002) in their study of 29 U.S. Universities, which collaborate with S.P., ended with some conclusions:

- The distance of an S.P. from a University has an impact to various aspects of academic missions of a University. When a park is close to a University there are increased chances of its external funding, whereas it provides more chances of employment for its doctoral alumni.
- Universities that engage more with research and development are more likely to report that interaction with the structure of an S.P. positively affects their orientation towards patent certifications and diplomas. Respectively, they are less likely to report that S.P. assists with external funding of their ability to hire distinctive researchers.
- The impact of relationship between S.P. and Universities regarding research is not constant, it changes with time. Initially technology parks do not affect the patent activity or the curriculum, but at a later stage this happens.

Komninos (2010) mentions that the process of technological innovation in S.P. is based on four constitutions:

- Collaboration of universities and businesses, regarding the use of university research facilities, the mobility of staff and communicating information.
- Networking of businesses and developing of strategic agreements and collaborations of suppliers - producers.
- Funding and support of spin-off projects for the creation of new technology startups.
- Attracting innovative organizations and businesses, spreading and transmitting research and technology.

Felsenstein (1994) in an empirical study on over 160 Israeli hi-tec companies inside and outside S.P., studied these two research questions:

a. Do the science parks contribute importantly to the growth of innovation through a business?

b. To what extent do those effects depend on the natural proximity and organization that is provided by the facilities of a science park?

First of all, the results show that, as it occurs by the interaction levels between businesses and local universities and the educational background of businesses, it does not necessarily relate with the innovation level of a business. Secondly, the location of an S.P. has a small and indirect contribution to the innovation level. The attractiveness of location of an S.P. could be a matter of general perception about prestige, not about the benefits of transferring technology and data influx.

The role of Science Parks in prefectural development of developed countries has been examined and confirmed many a times. However, in developing countries it is more difficult to evaluate their contribution, because S.P. are relatively new there (Ratinho & Henriques 2010, Premkamolnetr N. 1998).

Many S.P. have developed in areas, where according to Gower & Harris (1996):

a. Demand for hi-tec industrial infrastructure is or would be, limited partially because of the industrial/scientific "history" of the area and

b. local economy is or would be in recess and with high levels of unemployment.

8. **Educational Tourism**

Educational tourism appears to have its starting point in Renaissance England with the Grand Tour, its bases, however, are long-standing. (Lagos, 2005, Kokkosis, etc 2011).

The environment of educational tourism has been described in a specific way. Within it is combined the place that links the need for entertainment and out-of-school education from its formal form to adult education. Wider educational tourism can be seen as becoming part of the specific and alternative forms of tourism in the form of ecotourism, cultural tourism and any other alternative form of tourism that involves lifelong learning. (Lagos, 2005, Kokkosis, etc, 2011).

In the context of cultural tourism, the specific form of educational tourism, which includes the following activities, engulfs those parts:

- organising of educational programmes for university and college students,

- educational and cultural programmes for school and university excursions from Greece and abroad,
- training and acquaintance programs of the Greek cultural heritage and greek language learning programs.
- Teaching courses of greek language.

Educational tourism is considered one of the most important developing tourist markets and can offer significant benefits in a region with rich cultural elements, which are an attraction for educational/student tourism, coming both from Greece and abroad.

(http://altertourism.gr/morfes-tourismou/politistikos-tourismos/ekpaideutikos-tourismos)

Part B

9. The Case of Ptolemaida

Ptolemaida is a town in northern Greece, Region of Western Macedonia. It belongs to the Prefecture of Kozani and is the capital of the Eordaia province. The distance from Kozani, capital of the prefecture, is 28 km and is the second largest town.

Map.1: Prefecture of Kozani (Nomos Kozanis), http://www.ptolemais.gr/maps.htm

Ptolemaida is characterized as the energy centre of Greece, because of thermoelectric plants, which use lignite from the area for power production. Moreover, during the 50's, large quantities of lignite were discovered underground and since then, the largest energy project of Greece was established in the wider area.
In specific, the discovery of lignite played a huge role in the development of the town and transformed it from agricultural to industrial. Until 2006 there were 5 active steam electric stations of PPC. Each year they mined 55 million tones of lignite and from the 15 thermoelectral units of 4,000 MWs power in the 5 mentioned plants, they produced 70% of total power in the country. Building companies, technical companies, labor, technical and scientific staff from all over Greece had settled in Ptolemaida because of the power plants.
A new lignite plan named "Ptolemaida 5" commenced in September 2015 in a plot of the old Komanos mine in Western Macedonia and is about to replace the previous 4 plants with one, less energy-consuming and more technologically advanced, aligned

with European and national requirements for environmental performances. The plant is already in the construction stage, in the area of an expired ore in Komanos mines (4th km from the existing SES Ptolemaida and 8 km from the town). It will be a 660 MW power plant, while 140 MW will be saved for teleheating of Ptolemaida. It will produce the same kilowats per hour compared to the old power plants that will be replaced, four plants of Ptolemaida town and two small of LIPTOL, in total 660 MW, but thanks to its technology the new one will burn less lignite for more power produced. It is calculated that with 7% less lignite consumption it will produce 43% more (average of 1 kg/kilowatt per hour, from today's 1,5 kg/kilowatt per hour. (http://el.wikipedia.org/wiki/ Πτολεμαΐδα)

The new plant is scheduled to be operational in 2022 and is expected to operate with lignite until 2028 when a fuel change will take place (all other PPC lignite plants will be withdrawn by 2023). PPC has already asked Japan's Mitsubishi, which is the manufacturer of electromechanical equipment, to carry out a study on the optimal fuel choice to be used by the new plant after 2028. A study carried out, taking into account the new data generated by the coronavirus pandemic in relation to estimates of the evolution of fuel prices and the cost of purchasing carbon dioxide emission allowances.

The supply of "Ptolemaida 5" with biomass, said the president and CEO of PPC, Giorgos Stassis, is one of the options considered in the context of the study. According to the information, if this solution is chosen, PPC will offer the land where farmers and cooperatives will cultivate the plants that will be designated as the most suitable, based on their energy content and the climatic conditions of the area.

The other alternatives being considered are the supply with natural gas, waste or a combination of the above solutions, and lignite may remain in the fuel mix of the plant as long as carbon capture and storage technology matures. This means that emissions will be zero.

The evolution of "Ptolemaida 5" is part of a series of new investments that PPC is considering in the plan for a fair transition of lignite regions. Detailed planning for the transition, including timetables and financing modalities, is expected to be ready in the summer (2020) to be put to consultation. In this context, priority from the POINT of VIEW of PPC will be given to projects that can directly create new jobs, such as the restoration of the land of the lignite mines and the construction of the large photovoltaic parks planned by the company.

(https://www.euractiv.gr/section/energia/news/apolignitopoiisi-energeiaka-fyta-os-kaysimo-gia-tin-ptolemaida-5/)

In addition, it is worth mentioning the workshop held on the de-lignification of the region on 07/02/2020. Strong reactions in the local community were provoked by the visit of the ministers of energy and development to Ptolemaida, in an attempt to cross the government's "line" for de-lignification, although entire towns and villages actually live and breathe thanks to PPC.

(https://www.efsyn.gr/politiki/kybernisi/230489_brazei-i-dytiki-makedonia-me-tin-apolignitopoiisi-stin-ptolemaida)

Therefore: The Ptolemaida basin is that area, which contributed the most in the development of Greece, by generating electricity. But it is time to look the future of this area in respect with reducing lignite activity. In other words, we should consider how the region can be helped with its gradual delignitization until 2030, that is calculated by the energy plan, still under negotiation, so as to create new job positions and escape conditions for young people. More specifically in the case of Ptolemaida no new businesses are required but recycling of the existing thermoelectric plants, to prevent this town from becoming a "ghost town" but a "smart town" instead.

The utilization and reusage of industrial monuments in Eordaia and specifically the facilities of *AEVAL,* ΑΕΒΑΛ[1] and S.E.S Ptolemaida[2], will become the source of financial growth for the area in the next few years, the post-lignite period. That was stressed out in the conference which took place on 05/12/2015 in Ptolemaida at the events of the 3rd Biennial of Urban and Architectural Restoration BRAU3. (https://e-ptolemeos.gr/pigi-anaptixis-i-viomichaniki-klironomia-tis-eordeas-schedia-epanachrisis-palion-ergostasion-parousiastikan-sti-bienale-architektonikis-astikis-apokatastasis/)

"AEVAL is indeed the reformation cradle of the energy basin" the former deputy-mayor of technical works stressed in his speech, Kostas Polichronidis. He mentioned the town plan for reusing the area of AEVAL as an industrial and business center and as an industrial museum and the investments made as of today, exclusively by

[1] Ανώνυμη Ελληνική Βιομηχανία Αζωτούχων Λιπασμάτων (ΑΕΒΑΛ) – Anonymous Greek Nitrogen Fertilizers Industry in Ptolemaida, which operated from 1964 until 1997.

[2] One of five Steam Electric Stations of the Ptolemaida region. SES Ptolemaida functioned from 1956 until 2014. On 09/11/2014 a disastrous fire broke out in the 4th unit of SES Ptolemaida, resulting in the total destruction of the 4th unit and damaging the control room of the 3rd unit.

initiation and funds of the town of Eordaia. He also mentioned that the development project, made by the town, remains incomplete. The town keeps trying to utilize and reuse, even partially, the facilities of the former AEVAL. (https://e-ptolemeos.gr/pigi-anaptixis-i-viomichaniki-klironomia-tis-eordeas-schedia-epanachrisis-palion-ergostasion-parousiastikan-sti-bienale-architektonikis-astikis-apokatastasis/)

The reusage of AEVAL begins with the creation of Multi-Themed Park for Cultural Preservation and National Center of Cultural Protection in its facilities, as mentioned by commissioned regional consultant in matters of Civil Protection, Elias Katanas. He highlighted that AEVAL is a shining example of urban restoration not only in local but also in national level. Furthermore, he mentioned there was a series of studies going for years to restore AEVAL and it was the solid request of all local stakeholders for utilization and restoration of its facilities.

(https://e-ptolemeos.gr/pigi-anaptixis-i-viomichaniki-klironomia-tis-eordeas-schedia-epanachrisis-palion-ergostasion-parousiastikan-sti-bienale-architektonikis-astikis-apokatastasis/)

"We as a Technical Chamber believe that the cradle and core of industrial heritage is Ptolemaida, is Eordaia with AEVAL and the huge industrial monuments of PPC", claimed the president of Technical Chamber of Greece/Western Macedonia, Dimitrios Mavromatidis. He argued that the goal of this conference is "to make local stakeholders see what can be done for the next day and how industrial heritage of the region become an opportunity for development". He also said that TEE (Technical Chamber) along with Prefecture and Town of Eordaia are processing, apart from listing and highlighting the industrial monuments, the issues of funding for necessary infrastructure and next steps for utilizing this heritage. (https://e-ptolemeos.gr/pigi-anaptixis-i-viomichaniki-klironomia-tis-eordeas-schedia-epanachrisis-palion-ergostasion-parousiastikan-sti-bienale-architektonikis-astikis-apokatastasis/)

According to former Kozani MP, Themis Moumoulidis on 04/12/2015 on the creation of a modern Industrial – Heritage Park, which would include the facilities of S.E.S. Ptolemaida and AEVAL, discussions for productive reconstruction of the country have begun. Greece needs to deposit a scientifically documented development plan for the next years. Also, there is scheduling for the post-lignite era, an object much desired for the energy centre of the country and one of the largest in Europe. The activity cycle of PPC will continue based on the energy and economy needs of the country and the region. (https://e-ptolemeos.gr/th-moumoulidis-ne-sti-dimiourgia-

sigchronou-viomichanikou-istorikou-parkou-gia-tis-ktiriakes-egkatastasis-tou-ais-ptolemaΐdas-ke-tis-aeval/)

The plant of SES Ptolemaida is out of order. There is a need for discussions of the next day for the plant, and administrative stakeholders along with the society must be there to regulate discussions. The dilemma is historic, whether the resources of PPC are exploited and subsequently its facilities be demolished, or the building signifies an important moment for the future of the area, and demands radical policies. (https://e-ptolemeos.gr/th-moumoulidis-ne-sti-dimiourgia-sigchronou-viomichanikou-istorikou-parkou-gia-tis-ktiriakes-egkatastasis-tou-ais-ptolemaΐdas-ke-tis-aeval/)

The thought of demolishing the building complex of SES Ptolemaida and exploiting the lignite deposits lying underneath the complex and the surrounding area is a suggestion without real prospect. Instead, some talks for exploiting the building complex in favor of the local society with developmental attributes is a political choice that repairs some foul plays and pushes forward the chapter of creative reconstruction and local development. (https://e-ptolemeos.gr/th-moumoulidis-ne-sti-dimiourgia-sigchronou-viomichanikou-istorikou-parkou-gia-tis-ktiriakes-egkatastasis-tou-ais-ptolemaΐdas-ke-tis-aeval/)

In the context of argument and creating a perfectly structured, viable future, it is suggested that an Industrial – Heritage park be created, to unite the facilities of SES Ptolemaida with the entrance of the town. It shall also include the facilities of AEVAL. The creation of a similar project improves the discussion about a reconstruction plan of the area, as it shall contribute to the improvement of life quality, living standards and financial growth. Industrial tourism brings about many advantages, but the most important one is possibly the upgraded public image of the region. When dealing with environmentally harmful facilities (such as power plants) this function becomes significant. Tourism can assist to the residents' feeling of safety about the industrial activities near them as well. The flow of information and learning are also huge motivations for developing this type of tourism – thus, governments and local authorities should be able to support industrial tourism (e.g. through the construction and maintenance of scientific parks or technology museums). PPC must reveal its sensitive and responsible policy, not only by opening new job positions and abiding by environmental rules, but simultanesously correcting some unfair moves, gradually delivering quality offsets to the community. (https://e-ptolemeos.gr/th-

moumoulidis-ne-sti-dimiourgia-sigchronou-viomichanikou-istorikou-parkou-gia-tis-ktiriakes-egkatastasis-tou-ais-ptolemaΐdas-ke-tis-aeval/)

It is a fixed policy the restoration and return of the lands back to society, where they belong. By creating a modern Industrial Heritage park, on of the largest in Europe, planning for the post-lignite era changed drastically. The facilities of SES Ptolemaida are living history and memory of the area and its workers. Here can he hosted important activities, such as a Modern Industrial Museum, which would increase visitation of the area (industrial tourism). Also, it is possible to create a European Conference Center of Energy and a Museum of archaelogocial findings in the lignite mines area, buried underneath them umexploited for decades.

Furthermore, the total of the land from SES Ptolemaida to AEVAL and the entrance of the town, in combination with other works, can become an ecological core for a heavily polluted region. This combination together with a complete (and not partial) plan of exploiting the facilities of AEVAL, will create new dynamics.

Greece needs more similar projects and activities that could improve its attributes and could create a new model for modern and viable cities, contributing to a peaceful co-existence between cities and industrial activity. The old management model and the lack of organized planning lead to dead ends, visible to everyone. (https://e-ptolemeos.gr/th-moumoulidis-ne-sti-dimiourgia-sigchronou-viomichanikou-istorikou-parkou-gia-tis-ktiriakes-egkatastasis-tou-ais-ptolemaΐdas-ke-tis-aeval/)

A unanimous reaction to the demolition of LIPTOL[3] and SES Ptolemaida was voiced by the Mayor of Eordaia and the heads of all parties in the Town Council of Eordaia at the emergency meeting called for this reason by former Mayor Savvas Zamanidis on 03/12/2015. (https://e-ptolemeos.gr/katholiki-antidrasi-stin-katedafisi-tis-viomichanikis-klironomias-tis-eordeas-stin-ektakti-siskepsi-pou-sigkalese-o-dimarchos-eordeas/)

The meeting, which was about the exploitation of SES Ptolemaida, attended former prefecture chairman of West. Macedonia, Theodoros Karypidis and former SYRIZA member of parliament, Themis Moumoulidis, who also expressed their opposition to any demolition of industrial heritage in the area. (https://e-ptolemeos.gr/katholiki-

[3] **ΛΙ**γνιτωρυχείο **ΠΤΟΛ**εμαΐδας (ΛΙΠΤΟΛ), **LI**gnite Mine of **PTOL**emaida, which was the first Steam Electric Station in Western Macedonia (1954).

antidrasi-stin-katedafisi-tis-viomichanikis-klironomias-tis-eordeas-stin-ektakti-siskepsi-pou-sigkalese-o-dimarchos-eordeas/)

Mr. Savvas Zamanidis, apart from his opposition to the demolition of LIPTOL facitilities, opened the issue of exploitation for SES Ptolemaida and the creation of an industrial park. He also added that the town should exloit the historical importance of SES Ptolemaida by creating an industrial park of tourism capabilities. The region has earned that right, because of the damage done to the environment and the people due to lignite mining. He mentioned that the town stakeholders repeat their opinion about the area; the disadvantage of the pollution can be replaced by a form of alternative tourism that will define the entire region making it a comparative advantage. (https://e-ptolemeos.gr/katholiki-antidrasi-stin-katedafisi-tis-viomichanikis-klironomias-tis-eordeas-stin-ektakti-siskepsi-pou-sigkalese-o-dimarchos-eordeas/)

There should be a golden section between rational exploitation of lignite and heritage preservation for industrial and other reasons, according to Dimitris Zarafidis, head of the Citziens' Movement of Eordaia and member of PPC. He stated that before any building demolition, PPC runs a digital mapping and listing of it, as they did in the case of a SES LIPTOL silo and further stated that the demolition of SES Ptolemaida has not been decided. (https://e-ptolemeos.gr/katholiki-antidrasi-stin-katedafisi-tis-viomichanikis-klironomias-tis-eordeas-stin-ektakti-siskepsi-pou-sigkalese-o-dimarchos-eordeas/)

LIPTOL is linked to the history of Ptolemaida because its development is directly linked to the development of PPC and thus both SES LIPTOL and SES Ptolemaida have to remain, because they are our local history, said the representative of major opposition, Giannis Aspragkathos. (https://e-ptolemeos.gr/katholiki-antidrasi-stin-katedafisi-tis-viomichanikis-klironomias-tis-eordeas-stin-ektakti-siskepsi-pou-sigkalese-o-dimarchos-eordeas/)

Antonia Holba, head of Laiki Syspeirosi (People's Coalition), expressed her disagreement, too, concerning the demolition of characteristic industrial buildings of the area, in order to transform them into an industrial park. (https://e-ptolemeos.gr/katholiki-antidrasi-stin-katedafisi-tis-viomichanikis-klironomias-tis-eordeas-stin-ektakti-siskepsi-pou-sigkalese-o-dimarchos-eordeas/)

Prefecture head Theodoros Karypidis claims that those industrial monuments are necessary for industrial tourism and they should remain by providing funds and labour force to run them. About 20.000 visitors arrived in the area mostly from

industrial tourism. If this ambitious project matures enough, this area will receive increased visitation. (https://e-ptolemeos.gr/katholiki-antidrasi-stin-katedafisi-tis-viomichanikis-klironomias-tis-eordeas-stin-ektakti-siskepsi-pou-sigkalese-o-dimarchos-eordeas/)

The opposite opinion of Georgios Dakis' party communicated the representative of major opposition, Giannis Kioses, in the Prefectural Council saying that his party supports the proposition for touristic exploitation of PPC power plants and it will march together with any decision made by the Eordaia Town Council. (https://e-ptolemeos.gr/katholiki-antidrasi-stin-katedafisi-tis-viomichanikis-klironomias-tis-eordeas-stin-ektakti-siskepsi-pou-sigkalese-o-dimarchos-eordeas/)

This proposition was further discussed on 07/06/2016, at the Town Council of Eordaia. After many hours the Council hollered its unanimous demand to stop the demolition of industrial facilities of PPC at SES LIPTOL and also freeze any planning of PPC for demolishing SES Ptolemaida, because these power plants are the industrial heritage of Ptolemaida and Eordaia and could boost an alternative development for the area. (https://e-ptolemeos.gr/stop-sto-gkremisma-ergostasion-tis-dei-apetoun-dimotiko-simvoulio-ke-foris-tis-eordeas/)

At the same time, the Administrative Council unanimously approved the proposition of former mayor Savvas Zamanidis, to immediately claim the making of an industrial park and museum, in order to attract alternative-industrial tourism. The body authorized its mayor to take all necessary action and contact with PPC and Ministry of Development to block all demolition plans. These contacts should be made with relevant stakeholders to promote the request of naming those facilities into industrial monuments.

In the two-day international symposium titled: "Industrial heritage as a lever of viable development: The case of LIPTOL", which took place in Ptolemaida on 11-12/03/2017 the necessity of planning out a rescue and exploitation of industrial buildings in Eordaia was stressed out. (https://e-ptolemeos.gr/apetite-schediasmos-gia-tin-axiopiisi-tis-viomichanikis-klironomias/) The then mayor of Eordaia, Savvas Zamanidis talked about a landmark day for the industrial heritage of Ptolemaida and Eordaia, that could contribute to its development. He mentioned that utilizing and exploiting lignite is still possible but other alternatives should be examined, too, highlighting that the industrial tradition is a development lever, while some time must

be devoted to planning and making progress for the sake of future survival. (https://e-ptolemeos.gr/apetite-schediasmos-gia-tin-axiopiisi-tis-viomichanikis-klironomias/)

That experience of reusing a former lignite mine in Germany was communicated by a german scientist, Professor Helmuth Albrecht, mentioning that with similar way we could use a region such as ours for tourism purposes. Also, he said that "the development possibilities are interesting in this place" and mentioned that in a first stage "we should scan the discussed area, understand the landscape, take into consideration the technological and social factors of development in the area, read the people and the social evolution which took place here". (https://e-ptolemeos.gr/apetite-schediasmos-gia-tin-axiopiisi-tis-viomichanikis-klironomias/)

German professor, Michael Farrenkopf, mentioned the way how they changed use of industrial infrastructure in the Bochum area, a former mining land in the Ruhr Valley, Germany, which became a field of industrial heritage. In the question about what could be done in our area he said: You must analyze your goals, that is the first step. And since he realized that the mining continues and will continue for years, he said that "what needs to be done is to analyze the present situation and look how you can exploit these areas in the future. I see possibilities to combine the current industry with a field of industrial heritage simultaneously." (https://e-ptolemeos.gr/apetite-schediasmos-gia-tin-axiopiisi-tis-viomichanikis-klironomias/)

The scientific principles and international standards for the preservation and registration of industrial monuments, presented by the Historian – Industrial Archaeologist and President of the Greek Department of TICCI Maria Mavroidi. TICCI, she said, can contribute substantially to the debate on the future of these industrial facilities but also more comprehensively about the future of western Macedonia's industrial heritage as an important resource of sustainability and sustainable development and progress in the region. How to salvage elements of these facilities to form the core of an industrial heritage industrial park in the area must be the subject of discussion and studies in order to highlight the multiple possibilities of exploiting these sites, in order to attract people and be educational in nature. There are a variety of examples in the mining areas and it must be borne in mind that we have active mines, so everything that is done has to be done in the light of lignite production as well as history. (https://e-ptolemeos.gr/apetite-schediasmos-gia-tin-axiopiisi-tis-viomichanikis-klironomias/)

The LIPTOL complex can be a driver of development for the region, stressed the former President of the Greek Department of the International Commission for the Conservation of Industrial Heritage, Architect Olga Deligianni. It pointed out that it was the first large PPC plant in the area, which also contained a briquette production plant. It is, she said, "a pioneering complex, a historical reference point and cannot be demolished", while stressing that "before any demolition must be preceded by the study and evaluation of the industrial complex." (https://e-ptolemeos.gr/apetite-schediasmos-gia-tin-axiopiisi-tis-viomichanikis-klironomias/)

Such a symposium was necessary in order to raise on a scientific basis both the issues of the industrial heritage of the industrial complex of the former LIPTOL, in connection with the rational exploitation of lignite, taking into account the international experience, because it is impossible to maintain all the buildings within, said the representative of PPC, Dimitris Zarafidis. He referred to the proposal to digitally capture all these installations and then create a museum in a space where valuable tools, installations and machines can be transferred, as well as records reminiscent of previous activity. To this end, he added, PPC has already made a proposal and is prepared to do a study on all this effort to create the Ptolemaida industrial heritage centre. (https://e-ptolemeos.gr/apetite-schediasmos-gia-tin-axiopiisi-tis-viomichanikis-klironomias/)

The Citizens' Stream of Eordaia comments in a positive mood on the decision of the Board of Directors-PPC for the creation of a Ptolemaida Lignite/Industrial Heritage Park. In particular, it argues that this decision is in the right direction because:

- It ensures the complete recording and imprinting of all buildings, mechanical equipment and production line of the entire industrial complex of the former LIPTOL based on the International standards for the recording of industrial installations (Modern digital imprinting).
- Based on this recording, parts of the equipment, tools and objects that will be transferred to the "Lignite and Industrial Heritage Park" will be used, along with the historical archive of LIPTOL.
- The specifications will be made for the start of the process of awarding the study for the creation of the park in cooperation with the Region of Western Macedonia and the Municipality of Eordaia with PPC.

- PPC's oldest plant, SES Ptolemaida, is excluded from demolition and based on the Study is expected to be the site of the creation of the Ptolemaida Lignite and Industrial Heritage Park. (https://e-ptolemeos.gr/t/ρεύμα-πολιτών-εορδαίας/)

The industrial museum of PPC is planned to be housed on the premises of the decommissioned after the catastrophic fire of SES Ptolemaida. In fact, liptol machines, which were described as "movable monuments", are to be transported there". (https://e-ptolemeos.gr/ston-ais-ptolema-das-to-viomichaniko-moyseio-tis-dei-ekei-tha-metaferthoyn-ta-michanimata-tis-liptol-poy-charaktiristikan-kinita-mnimeia/)

This was demonstrated by a study carried out by PPC, which has been submitted to the competent production directorate of PPC after completed. In particular, it is a study of an architectural nature more, as it says which machines are to be transported and in which areas of SES Ptolemaida. (https://e-ptolemeos.gr/ston-ais-ptolema-das-to-viomichaniko-moyseio-tis-dei-ekei-tha-metaferthoyn-ta-michanimata-tis-liptol-poy-charaktiristikan-kinita-mnimeia/)

Of course, when exactly the transport of the machinery - mobile monuments will take place, that is, when this study will be carried out or how they will be exhibited, as the museum will be highlighted by the selected machines, no one knows yet, as the implementation of this project is to be announced shortly by PPC.

(https://e-ptolemeos.gr/ston-ais-ptolema-das-to-viomichaniko-moyseio-tis-dei-ekei-tha-metaferthoyn-ta-michanimata-tis-liptol-poy-charaktiristikan-kinita-mnimeia/)

In the meantime, however, some facilities for the operation of the lignite mines of PPC have already been transferred to the premises of SES Ptolemaida, namely the Machinery and Electrotechnic s.a. of the ΛΚΔΜ4, while on the upper floor of the administration of SES Ptolemaida has been transferred the Chemical Laboratory of the Industrial Group.[5] (https://e-ptolemeos.gr/ston-ais-ptolema-das-to-viomichaniko-moyseio-tis-dei-ekei-tha-metaferthoyn-ta-michanimata-tis-liptol-poy-charaktiristikan-kinita-mnimeia/)

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4 Λιγνιτικό Κέντρο Δυτικής Μακεδονίας (Lignite Center of Western Macedonia).

[5]Lignite Center of Western Macedonia.

By decision of the former Minister of Culture Lydia Koniordou, "movable monuments" were characterized twenty-one (21) objects of the mechanical equipment of the industrial complexes LIPTOL and SES Ptolemaida, allegedly owned by PPC S.A. in Ptolemaida, for the museum promotion of the selected machines. (https://e-ptolemeos.gr/kinita-mnimeia-charaktiristikan-michanimata-tis-liptol-kai-toy-ais-ptolema-das-ta-prota-21-antikeimena-gia-to-viomichaniko-moyseio/)

In the ministerial decision, published on 03/07/2018 in the Government Gazette (Sheet of the Government Gazette), No. Sheet 2578, it is stated in particular that the designation as movable monuments of twenty-one (21) objects of the mechanical equipment of the industrial complexes LIPTOL and SES Ptolemaida, is made because: "this industrial equipment, which is a unique example of the first application of lignite technology in Greece, has historical and technological interest due to its uniqueness and is a valuable testimony to the rapid industrial development of the last fifty years in Greece" (https://e-ptolemeos.gr/kinita-mnimeia-charaktiristikan-michanimata-tis-liptol-kai-toy-ais-ptolema-das-ta-prota-21-antikeimena-gia-to-viomichaniko-moyseio/)

It is pointed out that the decision of the former Minister of Culture also provides for the care to be taken of:

a. for the proper archival recording and storage of the Archive of The Ptolemaida PPC, which is connected with the operation of the SES and LIPTOL units, in cooperation with the GAK N. Kozani and

b. for the museum promotion of the selected machines, which may form the core of the collections of a museum for the Industrial Development of Greece together with the evidence of the Archive of the PPC S.A. (https://e-ptolemeos.gr/kinita-mnimeia-charaktiristikan-michanimata-tis-liptol-kai-toy-ais-ptolema-das-ta-prota-21-antikeimena-gia-to-viomichaniko-moyseio/)

The 21 machines that were designated movable monuments

Description

List of objects in the Industrial Group of the SES Ptolemaida / LIPTOL, Department of natural lignite processing:

1) Natural lignite crusher, HUMBOLDT, 1954-55.

2) Hammer mill, HUMBOLDT, 1954-55.

3) Retrograde sieve or screen, HUMBOLDT, 1954-55.

4) Belt conveyor weigher, PFISTER, combined construction, 1956.

5) Control panel, SIEMENS, 1956.

List of objects in the Industrial Group of the SES Ptolemaida / LIPTOL, Lignite briquette plant (briquette shop):

6) Lignite dryer, HUMBOLDT, 1955-56.

7) Lignite Plinth Press Station, HUMBOLDT, 1955- 56.

8) Press station, electric motor panel, 1956.

9) Power supply cabinet, SIEMENS, 1957.

10) Control panel (for operation), SIEMENS, 1957.

11) Dryer motors starter, unknown manufacturer, 1957.

12) Air compressor, unknown manufacturer, 1955 - 56,

13) Pressure station grinding machine, unknown manufacturer, 1955 - 56,

14) Pressure station grinding machine, unknown manufacturer, 1955 - 56,

List of objects in the Industrial Group of the SES Ptolemaida / LIPTOL, Minor SES Ptolemaida:

15) Turbogenerator for electric production, AEG/KWU, 1955-56

16) Feed water pump for boiler and turbines, KKK / HULBERG, 1955.

17) Steam turbine control panel, AEG, 1955.

18) Steam turbine electric control panel AEG, 1955.

19) Steam generator's air, control panel, unknown manufacturer, 1957.

20) Steam generator's, electric control panel, AEG-B και W, 1957.

21) Alternative generator's, electric control panel, AEG, 1957.

(https://e-ptolemeos.gr/kinita-mnimeia-charaktiristikan-michanimata-tis-liptol-kai-toy-ais-ptolema-das-ta-prota-21-antikeimena-gia-to-viomichaniko-moyseio/)

On 22/05/2019, a video was published, in which PPC presented the "Culture Factory" of SES Ptolemaida. In this project, in addition to the creation of an Industrial-Historical Park, PPC proposes the creation of a film studio in the same space.

SES Ptolemaidas has been inactive since 2014. There, the technological achievements of other eras today "sleep" and wait time to wear them out. Thus, comes a proposal for the exploitation of these much important facilities of SES Ptolemaida and their conversion into film studios.

According to the former president and CEO of PPC S.A., Mr. Panagiotakis, as stated in the video, "an activity like this that is at the cutting edge of technology and culture worldwide, will contribute to a rapid increase in the cultural level of the inhabitants of the region and especially the youth".

Also, in the video, the former regional governor of Western Macedonia, Mr. Karipidis, stresses that there are people, there is know-how in the region, there is the will so that Western Macedonia, Ptolemaida, these unique infrastructures and facilities become a place of creation, attracting investment.

Moreover, the video argues that the creation of film studios on the premises of SES Ptolemaida is the first step for the next day of the region. In fact, it should be noted that the conditions exist or are being developed on the part of the state in order to eventually encourage and implement this activity.
In addition, we are informed by PPC video that the National Audiovisual Centre (EOME) supports this activity. It also claims to be a reference point for peoples' culture, cooperation and friendship, because Western Macedonia is a gateway to the Balkans, a gateway to Europe in a global village that unites us with culture.

PPC and local stakeholders want to inspire a Hollywood air in Ptolemaida, by converting the old, inactive steam power station into a film studio of international standards. This effort, based on the idea of director and Kozani MP of SYRIZA, Themis Moumoulidis, was initiated by the Prefecture of Western Macedonia and PPC, with the support of the Ministry of Digital Policy.
The plan was revealed as a proposal for the new development perspective of the region in the post-lignite era. The other two are the further development of the cultivation of aromatic and medicinal plants in restored lands of former mines and the "adoption" by PPC of a local volleyball team aiming at its promotion to the First Division.
As already mentioned, SES Ptolemaida is one of the oldest lignite stations in the country, which after six decades of operation has been turned off recently It is apparent that the industrial facility itself and the surrounding lignite-mining area along with restorations of the territories together constitute an exceptional environment suitable for large film and television productions. There have been contacts with various ministries and foreign film producers, while PPC can participate in the scheme in a number of ways, not to mention the free disposal of the facility.
These initiatives could create hundreds of jobs, make the region a focus of the film industry, and upgrade the University of Western Macedonia, which can guide its curriculum in order to serve the new needs. Within the framework of the project is the exploitation of the adjacent stone settlement of Proastion village, which belongs to PPC and can accommodate actors, directors etc.
A film production centre in the region of Western Macedonia has been in the plans of the Prefecture for long, while potential investment interest exists on the other side of

the Atlantic. The immigrant family of Mirkopoulou, owner of the famous studios "Cinespare" in Chicago, is aware of it and has shown interest.

The government wishes to attract investment in the audiovisual industry. So, apart from the facilities of the old SES Ptolemaida, which could house the studios, the area provides a unique canvas that is offered for film productions, with mountains, virgin natural landscape and settlements where time has stopped in the 19th century. Unfortunately, the whole project is still premature, as there is not yet the institutional framework that will incentivise investments in this sector, with financial assistance of the state.

Without doubt the audiovisual sector is now the largest industry in the world and Ptolemaida should exhaust the possibility of exploiting its unique footprint and taking advantage of opportunities.

Positive in the exploitation of the inactive SES Ptolemaida is also the president of GENOP PPC, Giorgos Adamidis. When the SES has completed its operation, it must be exploited and not kept a metal heirloom to be looted. Mr Adamidis has visited similar facilities in Germany, in the Ruhr Valley, which have been used as monuments of industrial heritage, with a series of recreational activities, with concert venues, climbing tracks and other sports activities. (https://www.ethnos.gr/ellada/8712_ptolemaida-metatrepoyn-ta-foygara-tis-dei-se-holigoyntiana-stoyntio)

The timing is not optimistic for the future of the company, but there are developments unrelated to energy. There are talks about a film studio. Along with a large area of the mine, as well as the settlement of PPC employees with 120 detached houses and various amenities, it is an ideal ground for film producers. The plan, named "Culture Factory", for exploiting SES Ptolemaida is in the "divestment" phase of its machines for scrap. It is the first lignite plant, the construction of which began in 1954. It was destroyed by fire on 09/11/2014 permanently ending the factory.

One part will become a piece of the studio and the rest will become a film school or PPC museum according to some workers. People hope that tourists will come. Employees are quite anxious about the future after PPC.

PPC can provide all the buildings of SES Ptolemaida to become film studios resulting in many new jobs. The prefecture needs to act fast by advertising the project. During a company's shareholders' meeting they discussed about alternative activities that would help to a smooth transition into the post-lignite period.

PPC executives, who are stationed in Western Macedonia, mentioned that the proposal is a "challenge" for the local community to use the allocated area for the exploitation of the region. Clearly their goal is to become a cultural centre of the southern Balkans.

The Mayor of Ptolemaida knows the plan for the film studios and supports it as it provides a big chance for the region. The notion of this plan is good but in practice it has issues that take time to complete. It requires enough money to implement this project. There is definitely a plan and a scheduled contract behind it. (https://www.vice.com/gr/article/zmjmq5/o-sta8mos-ths-deh-sthn-ptolemaida-poy-mporei-na-ginei-h-warner-bros-ths-elladas)

Elements of the Historical Heritage of Ptolemaida Steam Power Stations were saved by the remaining employees; indoor and outdoor material scattered around was collected of the country's first Power Plant, in order to create an Album and a museum. Valuable information comes from the multi-page book which contains the names and specialties of the first 109 employees, the organization charts of the Station, the data of the Directors who served there.

The collection also includes uniforms, the individual means of protection used by the first industrial workers, printed material of that time, many photographs, but also the flags that waved during the inauguration ceremony of SES Ptolemaida, on 28/10/1959. The last 15 employees of PPC in the now inactive Factory gathered the remaining technological equipment, such as the older lathe, the roller coaster that served the transport of briquette from SES LIPTOL to SES Ptolemaidas etc.

The proposal is, as put forward by the Security Technician Yiannis Galanos, to hold a conference to highlight all those parameters that synthesized the energy profile of the region sixty years ago. (https://www.ert.gr/perifereiakoi-stathmoi/kozani/ptolemaΐda-syllogi-istorikon-stoicheion-kai-keimilion-toy-protoy-ergostasioy-tis-dei/)

10. **Interviews and perspectives**

This project has a lot of supporters. However, some residents of the area express their doubts whether the goal of creating an Industrial Park in the grounds of SES Ptolemaida is realistic.

In particular, they argue that in 2021 the SES Kardia will be shut down and will be followed by gradual delignitization by 2030 in all the area of Ptolemaida and W. Macedonia. So, they are wondering how it is going to become an Industrial Park when there is no money. Moreover, they talk about environmental degradation of the area, delays in the payments of contractors, relocation of villages-residents, hidden conclusion of the landslide, the risk of survival of Valtonera village, delays at the fault of PPC for the 5th Unit, non-restoration of the land while the factories are closing.

They also stress that in order for these actions to take place, PPC, the state, the local community and universities must contribute so that the factories do not become carcasses like AEVAL.

In addition, commenting on the creation of film studios some imaginative residents of the area have humorously baptized it Kailarwood, according to Hollywood. (Kailar was the name of Ptolemaida during the Period of Turkish Occupation).

11.Methodology and Interview Profiles

Our evidence for this paper comes mostly from interviews concerning opinions and their knowledge about the creation of tourism. In that context and in order to obtain a global view we contacted either directly, in their workplace, or by telephone, or e-mail with employees in key positions in Ptolemaida. The sample of interviewed people was chosen based on their direct working relationship with PPC or indirectly based on individuals whose activities were financially linked to PPC.

To our questionnaire we received replies from 81 people. Most of them are:

- PPC executives in the Basin of Western Macedonia, mainly in the region of Ptolemaida
- CEO of a Company
- Director of a Mine
- Director of a Steam Power Station
- Head Director for the department of Operation and Maintenance
- Head Director of Administrative Services or Chemical Technology and
- Head Engineer of Works.

We also got answers from:

- Bank executives of the region
- some businessmen /women, who cooperate with PPC.

The age range of respondents is from 42 to 63 years, with an average of 54 years and the educational level of most of them being University level (bachelor's degree). The majority of interviewed people are men, because the jobs of PPC mostly concern professions that are taken up by men.

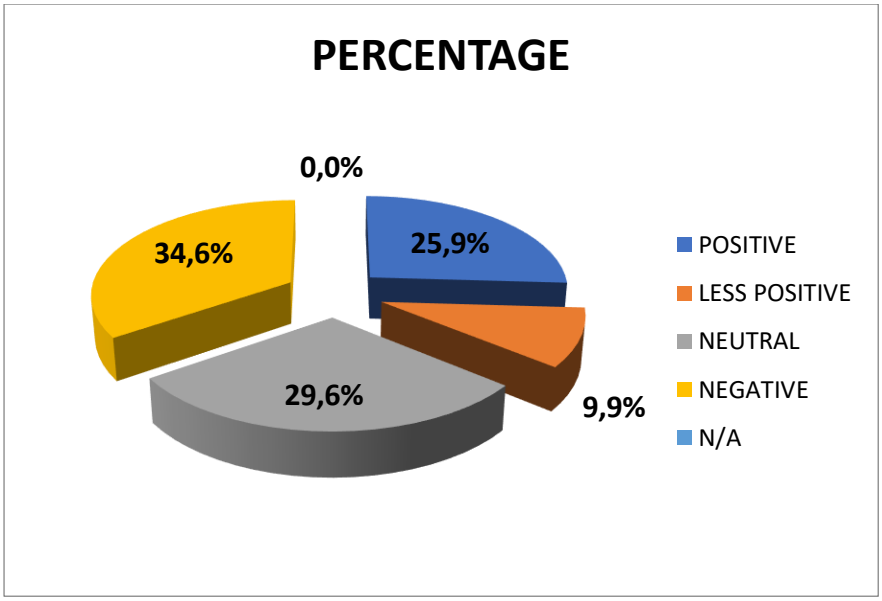
12. Questionaire – Answer Analysis

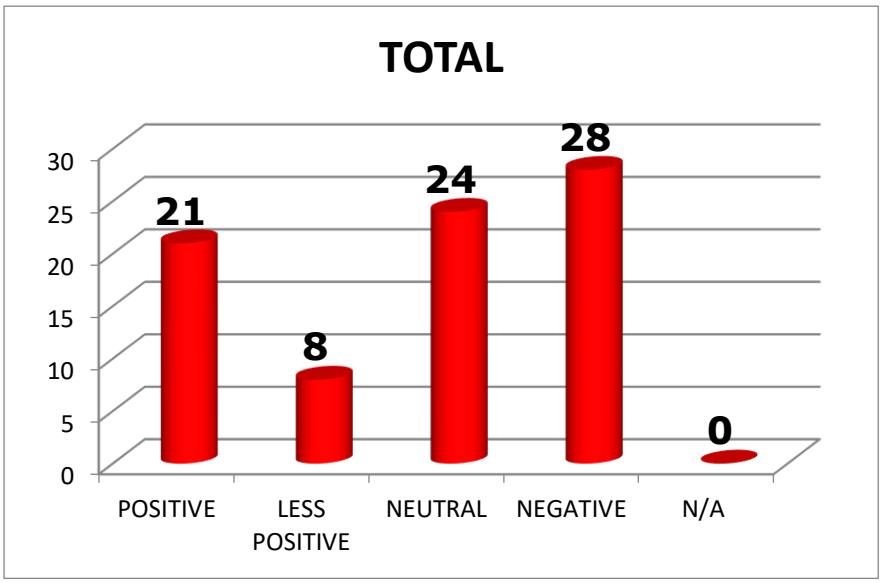
In the questionnaire, our first question concerned the company they work in, their position and their age.

Questions 2 to 5 concern their view of the present and future of the region of Ptolemaida in relation to the current and future position of PPC and its ownership. Finally questions 6 to 9 relate to their view on the subject of this thesis project.

Below we will comment on the distribution of the answers to the individual questions put to them, so that we can express our argument.

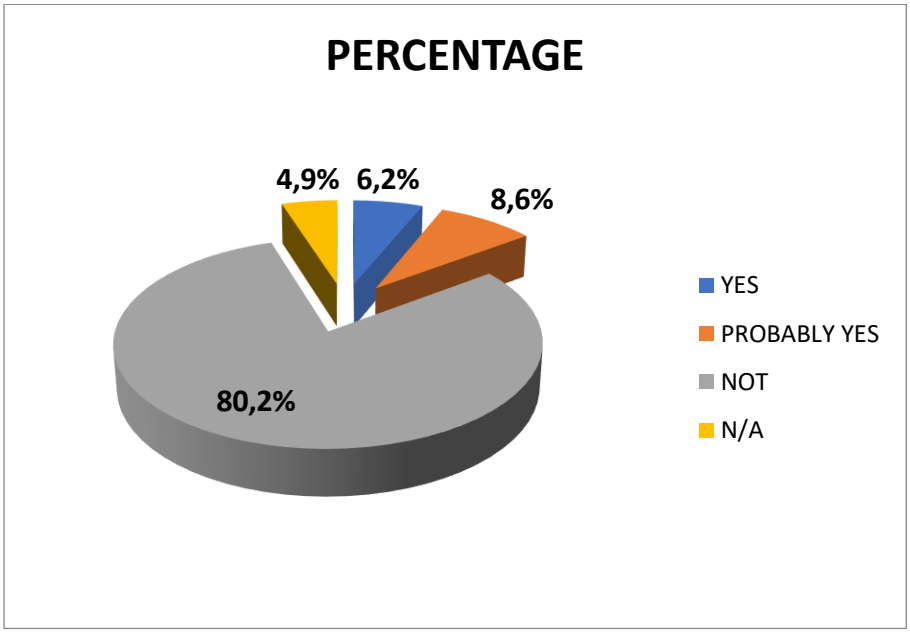
2. What is your opinion on PPC's privatizations?	TOTAL	PERCENTAGE
POSITIVE	21	25,9%
LESS POSITIVE	8	9,9%
NEUTRAL	24	29,6%
NEGATIVE	28	34,6%
N/A	0	0,0%

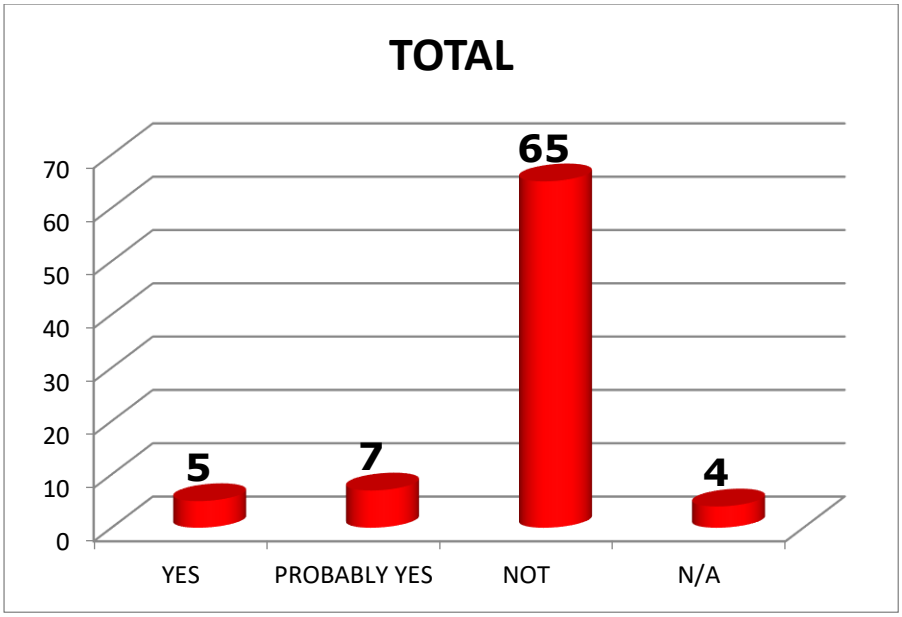




Comment: The answers to this question are evenly distributed if we consider three groups: the positive/ less positive, the neutral and the negative answer. There are sufficient justifications for all cases, but even in the negative responses there is the view that PPC should be modernised to cope with competition while those with a positive view of privatisation believe that PPC should be paid a significant price, while the private sector should be controlled by the state.

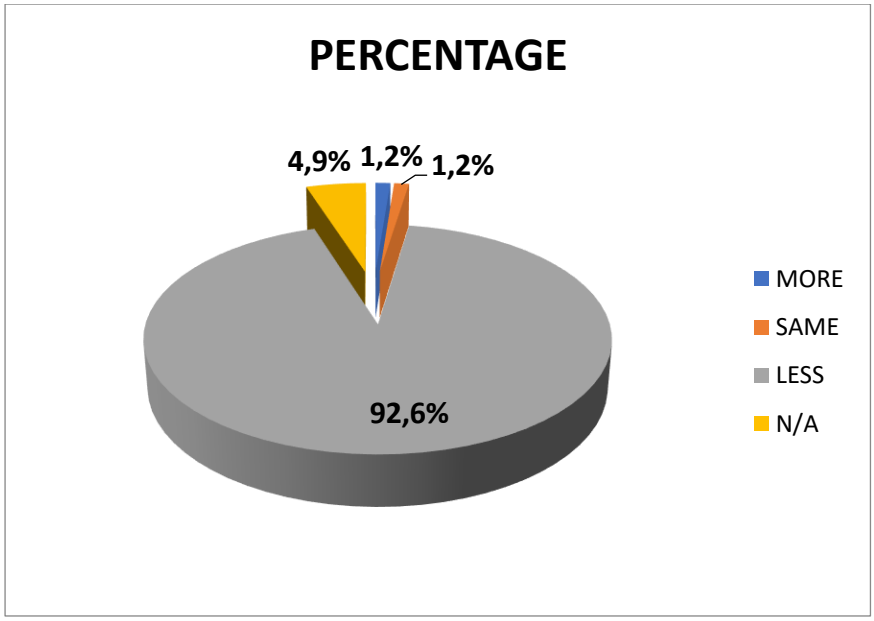
3. Does the local industry continue to grow or not?	TOTAL	PERCENTAGE
YES	5	6,2%
PROBABLY YES	7	8,6%
NOT	65	80,2%
N/A	4	4,9%

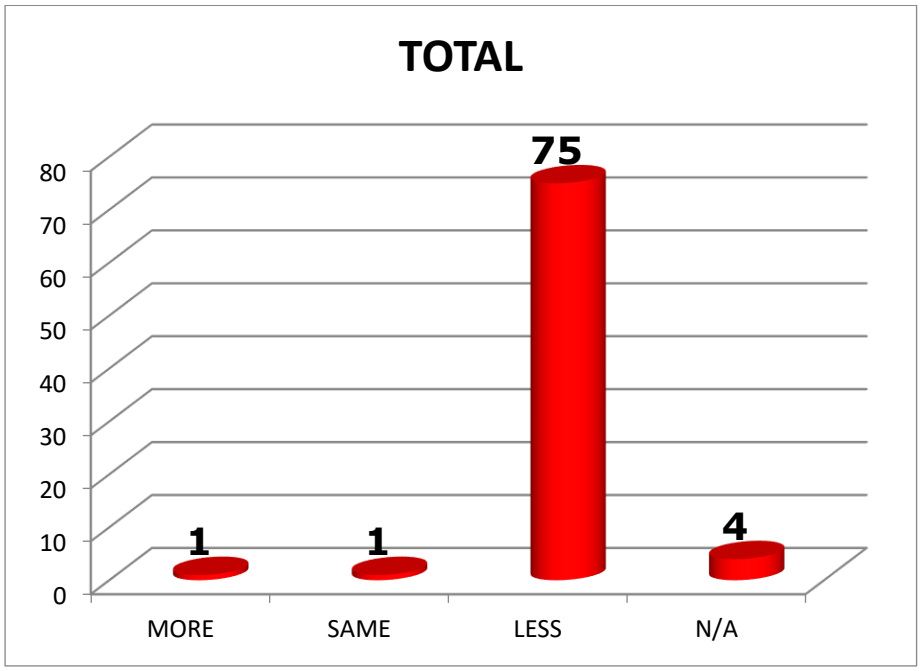




Comment: The majority of respondents to this question (almost 80%) shows that they do not believe that the local industry will continue to grow in the event of privatization of PPC, because individuals for the purpose of a quick profit will not spend much in the region, nor will they support the local industry.

4. Are more or less factory workers employed today than in the past?	TOTAL	PERCENTAGE
MORE	1	1,2%
SAME	1	1,2%
LESS	75	92,6%
N/A	4	4,9%

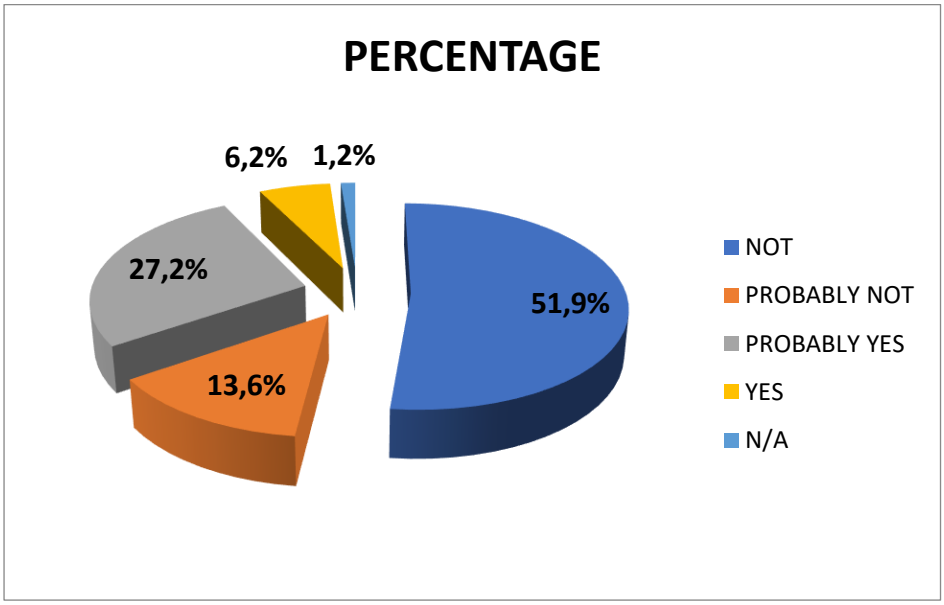


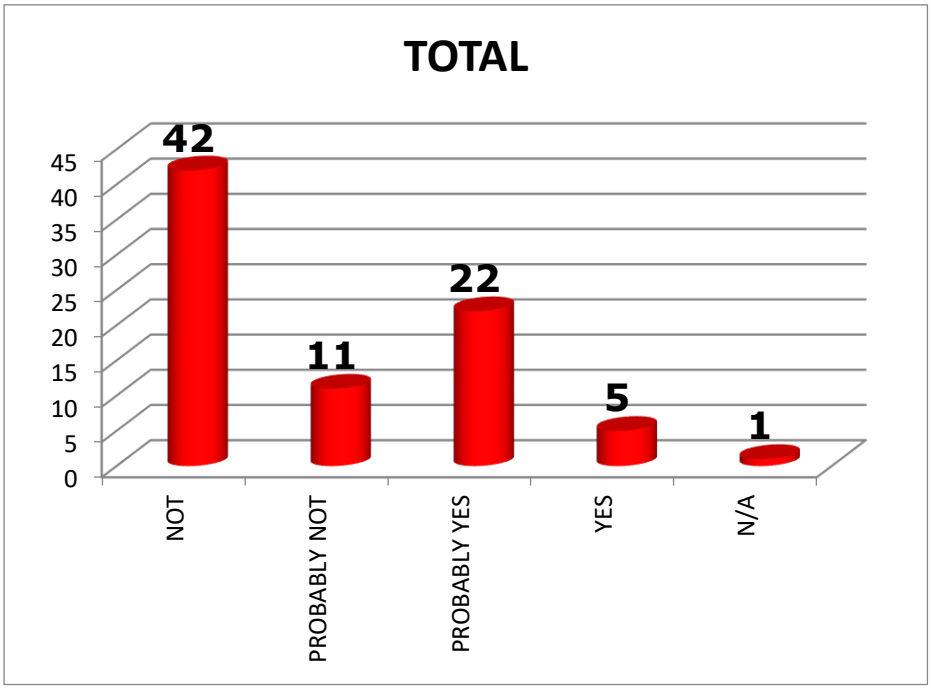


Comment: The vast majority (almost 93%) of answers says: NO. And this is not an assessment, it is a reflection of reality.

5% has not expressed an opinion and only 2% of them believe that the employees will remain the same or more.

5. Is there a future for Ptolemaida without PPC?	TOTAL	PERCENTAGE
NOT	42	51,9%
PROBABLY NOT	11	13,6%
PROBABLY YES	22	27,2%
YES	5	6,2%
N/A	1	1,2%

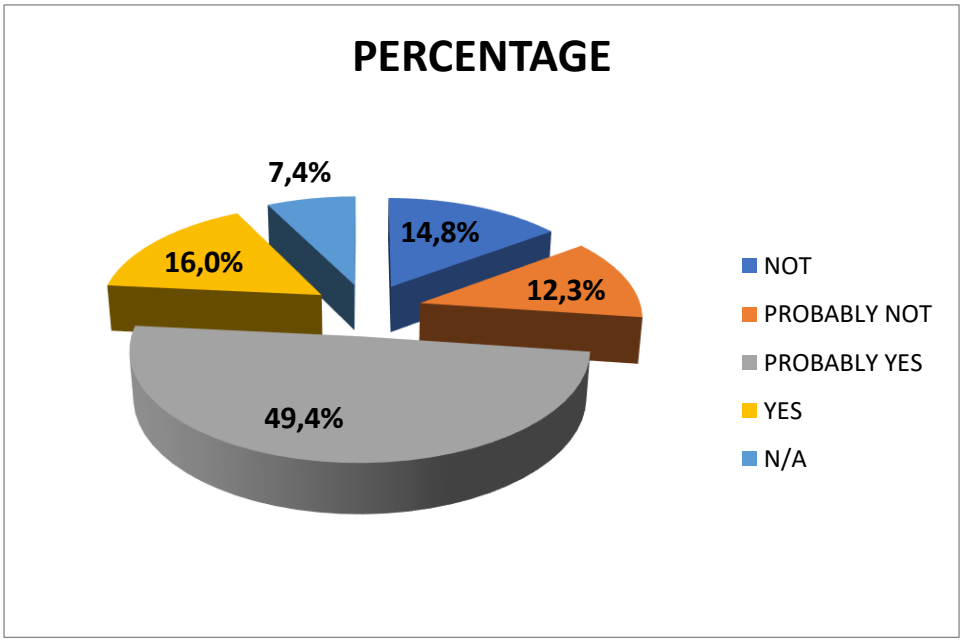


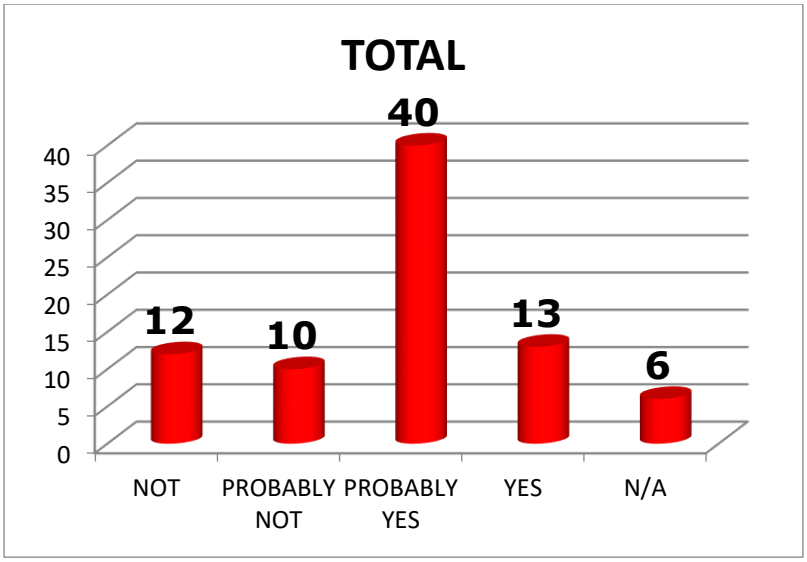


Comment: Half and more of respondents answered directly not, while 14% did: probably not.

33% stand between PROBABLY YES and YES. Even they have many reservations and set several conditions for maintaining employment and a professional future at current levels.

6. Is there a possibility of economic recovery through tourism and development?	TOTAL	PERCENTAGE
NOT	12	14,8%
PROBABLY NOT	10	12,3%
PROBABLY YES	40	49,4%
YES	13	16,0%
N/A	6	7,4%

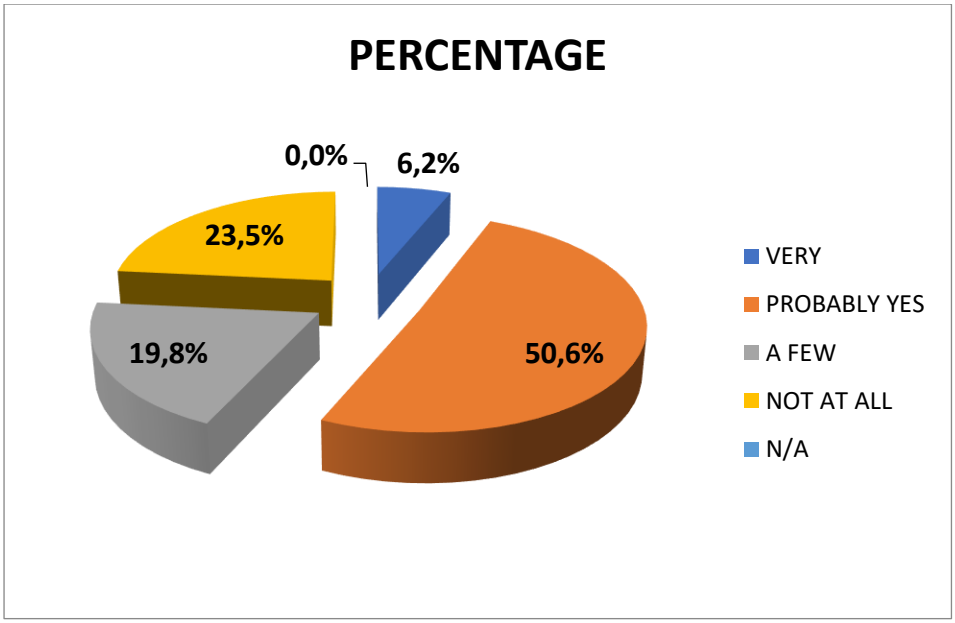


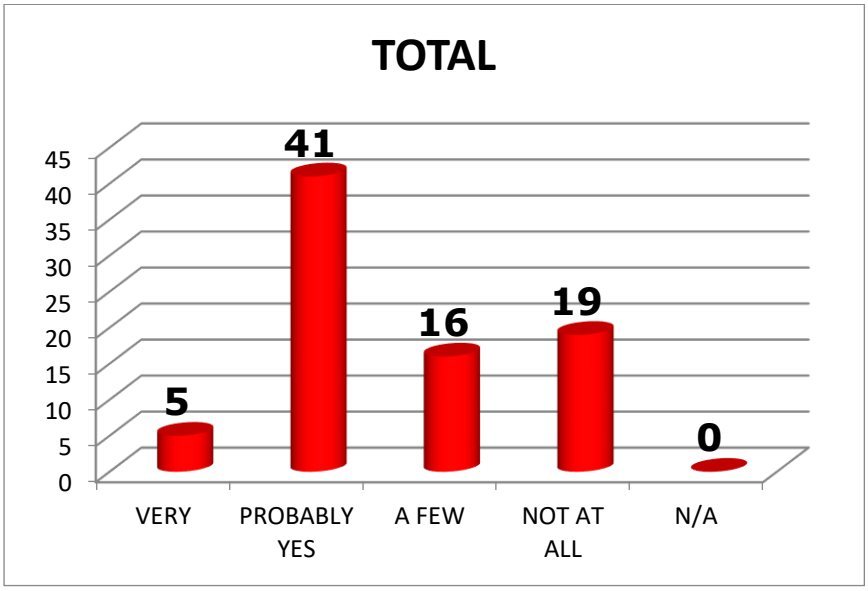


Comment: 27% of respondents do not believe in this perspective, 66% believe it, although not very warmly. There are six persons who do not express an opinion.

Here it will take a lot of effort as well as the submission of a serious and promising plan to persuade people to participate and to help directly or indirectly to achieve it.

7. How likely is it that an industrial park will increase Ptolemaida's name as a model city and tourist destination?	TOTAL	PERCENTAGE
VERY	5	6,2%
PROBABLY YES	41	50,6%
A FEW	16	19,8%
NOT AT ALL	19	23,5%
N/A	0	0,0%



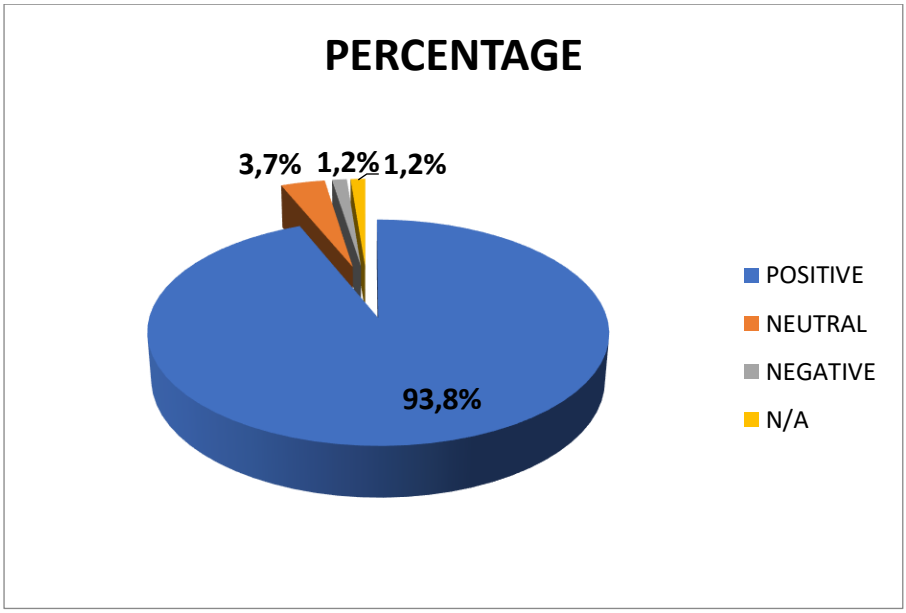


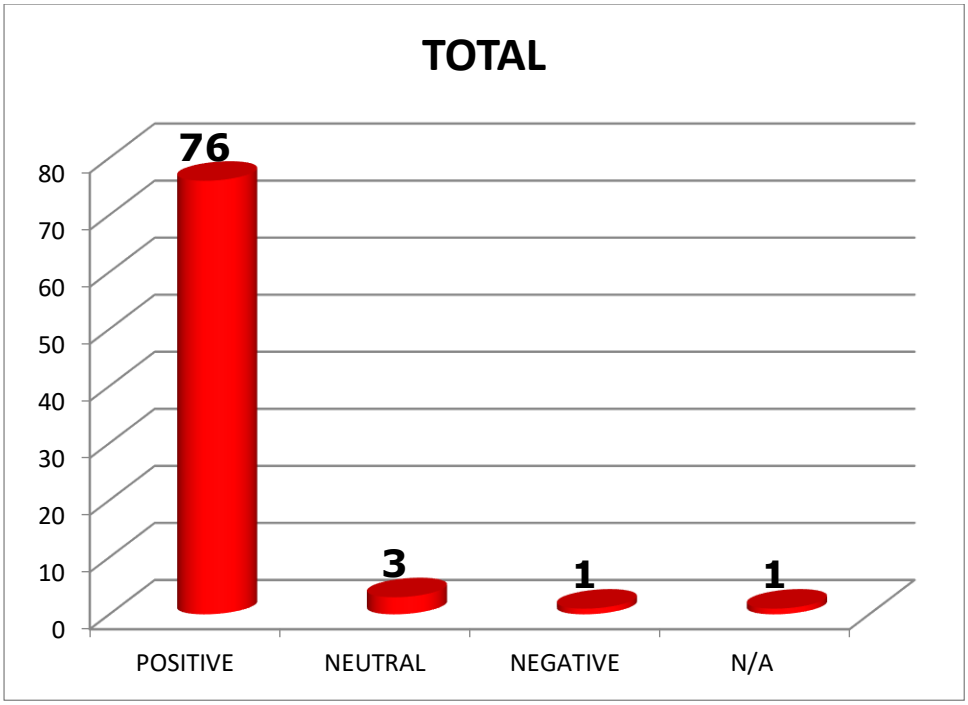
Comment: Here 6% think that yes and 50.6% think that probably yes, an industrial park will increase Ptolemaida's name as a model city and tourist destination.

19.8% think it is a few likely while 23.5% do not believe it.

And here it seems that such an undertaking is not easy. If it were, it would have been done by some by now. On the plus side, there are tremendous prospects for any individual, company or organisation that wants to take this perspective seriously.

8. How do you see the possibility of incoming tourism in the city? Positive or negative?	TOTAL	PERCENTAGE
POSITIVE	76	93,8%
NEUTRAL	3	3,7%
NEGATIVE	1	1,2%
N/A	1	1,2%

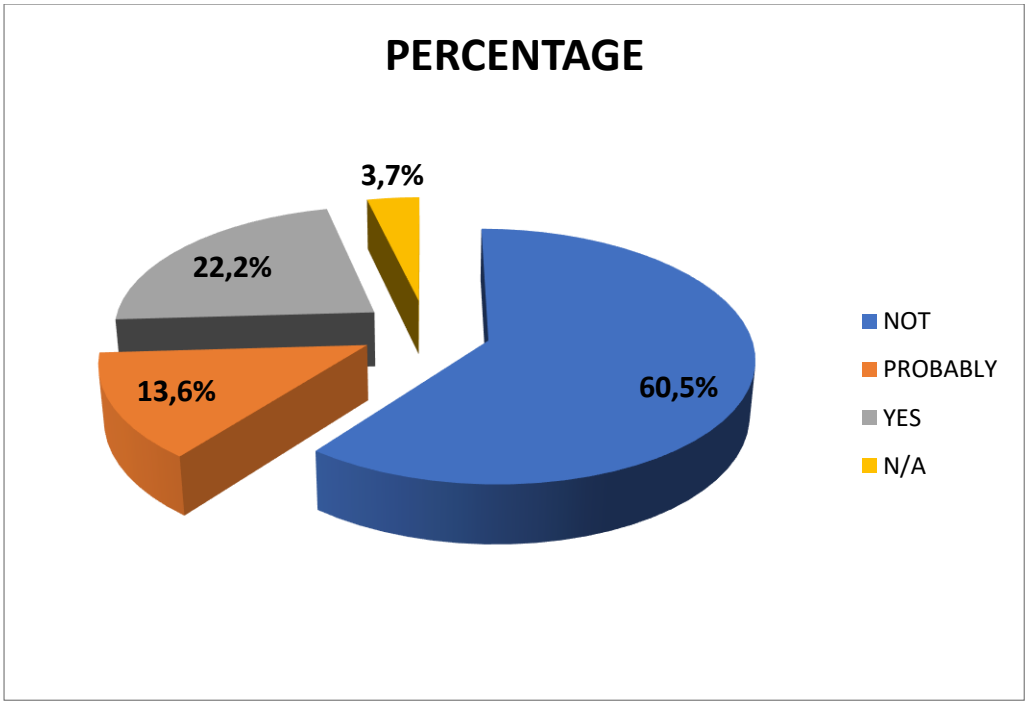


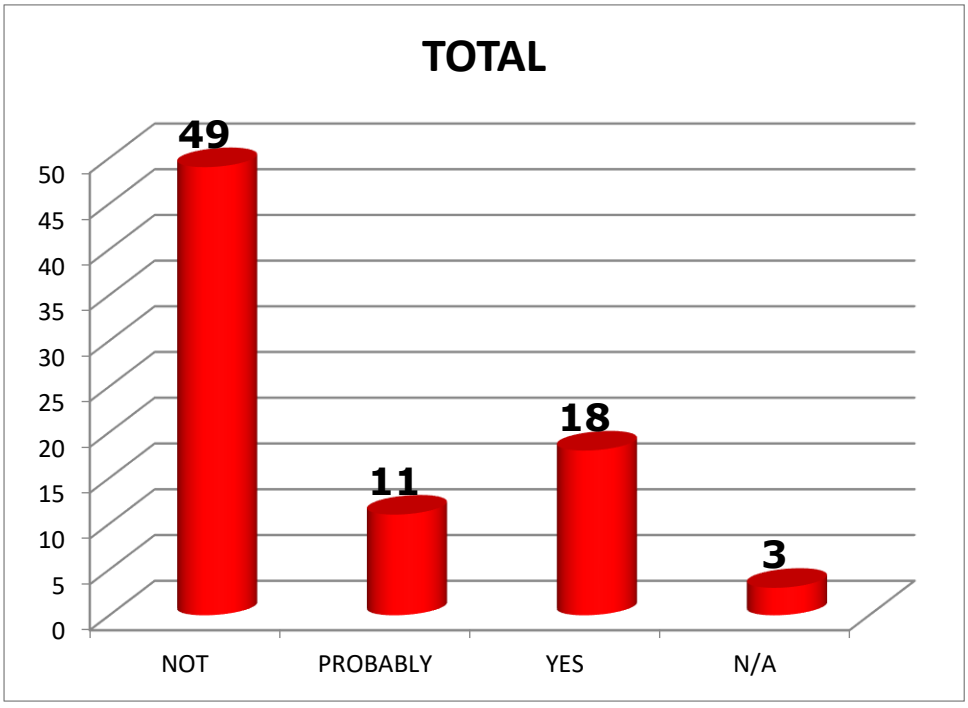


Comment: The answers to this question almost 94% agree that such a prospect will be positive.

It is therefore ensured from the outset that such a project will be accepted by the local community and it seems that such an effort will be successful.

9. Do you know of any similar cases of industrial parks in Greece or abroad that were successful?	TOTAL	PERCENTAGE
NOT	49	60,5%
PROBABLY	11	13,6%
YES	18	22,2%
N/A	3	3,7%





60 % of the answers to this question are negative. This means that many people have no idea about it (or never expressed interest to find out).

Also 14% of them they are not sure about it.

Only 22% of them know about industrial parks in Greece or abroad.

It is therefore ensured from the outset that the local community should be informed about the benefits of the industrial park to be able to accept it, due to the optimistic results. Should the project begin in the immediate future, we suppose that it would be met with a warm welcome by the majority of people.

We conclude, therefore, that citizens are wary of the preparations and implementation of such an operation, as they consider it utopian in its realization, although it is viewed positively as an idea. On the other hand, however, it seems that the project finds strong supporters of both political leadership and local and social actors. They strongly believe that this project with effort can be implemented and will provide economic and tourist upgrade in the future.

13. Results

To reach these conclusions we took into account:

1. The project published by PPC,
2. The comment on this project by ETHNOS,
3. The comment on this project by Vice,
4. The comment on this project by ERT Kozani,
5. The general mood and opinion of the local society
6. And of course, the statements of interviewed employees-executives of PPC.

The citizens must be cautious about the realization of such a project because they think it as utopic, even though its idea is tempting. On the other hand, it seems that the project has vivid supporters, not only in political leadership, but also in local and community stakeholders. They believe that with strong effort this project will boost the economy and tourism in the future.

14. SWOT Analysis

At this point we shall mention that the PPC proposal is almost widely accepted. We agree on its majority, but we estimate that it is not immediately feasible project. That is why we suggest, as a start, the Technology Park and Museum to be created; this will lead directly to financial and tourism development. At a later stage it will be possible to make true the plan of a Film Studio, as an attraction, when and if the Technology Park and Museum brings financial relief to the area.

Strengths of this proposal:

- The existing facilities of the power plant, so no extra funds will be needed for new infrastructure,
- The experienced staff, their technical knowledge and qualifications,
- Perfect cooperation and support of TEI (Technical Educational Institute) of West Macedonia (Kozani) throughout this project. Another advantage is the short distance (only 10 km) between the TEI and the power plant of PPC,
- We estimate this venture to become successful because of the strong will, enthusiasm and mood to assist by the majority of local people and the involved governing bodies.

Weaknesses:

- Funds required for this investment are huge and there is danger of underfunding,
- A small majority of residents thinks of this grandeur project as unrealistic, so they pose as an inhibitor.

Opportunities:

- Financial rebirth of the region due to the development of a wide operations circle in many fields,
- The transformation of a destroyed factory from an abandoned site into industrial heritage site and
- The most important attraction of educational and alternative type of tourism.

Threats:

- No significant threats were found due to the multiple benefits. There is not any competition that can offer similar cultural experiences whether it means a rival company or a nearby city with richer heritage.
- A realistic danger is the lack of funding that may occur if the project is not planned thoroughly.
- Slow bureaucracy from state and private parts concerning the administrative and financial issues of the project. If the active stakeholders do not synchronize their actions fast as to who is going to manage the museum-park, hire staff and arrange the touristic part it may never actually start its operations.

It becomes more than clear that PPC as a company should run the project in direct collaboration with the Town of Eordaia and the Prefecture of Western Macedonia. PPC should be able to manage the Industrial Park-Museum and be responsible for guarding and preserving its premises, organizing the tours and keeping the financial balance of the Museum. The Town and Prefecture come into play by promoting the project to every interested party (visitors, other cities etc) and providing hospitality and transport to the tourists. This step should be done after sitting down with hotels, hostels and owners of private houses and car shuttles in order to produce an attractive price package. (transport, tour of the museum and overnight stay).

15. Tourism in Ptolemaida-Eordaia

Over time there are many recorded educational visits of schools to power plants of the wider area and in particular:

- Primary schools,
- Junior high schools and
- High schools from many regions of Greece.

Moreover, the university departments of:

- Mechanical engineers,
- Chemical engineers,
- Electrical engineers and

- Environmental engineers.

We are optimistic that educational tourism, will grow when the Industrial Park is establishedε with increased visitation from schools and universities. Furthermore, it will be possible for a plethora of scientific conventions to be organized, in national and worldwide scale.

Also, the creation of Film Studios could attract:

- producers,
- contributors and film cast members,
- visitors from all over the world,

turning the area into a high-class entertainment center. Consequently, the creation of an Industrial Park and a Film Studio will bring a note of traveling and touring around to the human activity, contributing to mental wellness and uplift.

Additionally, taking into account that Western Macedonia is an entrance for the Balkans, entrance for Europe and the fact that Ptolemaida is 30 km away from Kozani and 141 km away from Thessaloniki, we understand that the coming of tourists is easy.

Also, Ptolemaida has got hotels that can host tourists, such as Hotel Pantelidis, Hotel Ioannou resort and Hotel Kostis (located in the town centre). Our suggestion would be to exploit the former village of PPC, which already has 120 residencies and is 200 m away from Ptolemaida PPC.

To sum up, this type of alternative tourism is a necessity, because ti will provide:

- the shaping of environmental knowledge and sensitivity,
- the strengthening of ecological conscience and interests, reducing the negative effects in the natural and cultural environment.
- These alternative types of tourism will contribute to our education and familiarization of visitors with local industrial culture, traditons, activities, and therefore upgrading an imminently downgraded area and relieving its economy.

- Another positive aspect of digitization in museums and technology parks is the collaboration between technology parks and museums all over Greece so as to promote tourism.
- A useful and easy tool would be the creation of a digital campaign. For example, the design of a website to promote the project and make tour reservations faster and more accessible to all age groups. This website and the possibility of online reservations can be assisted by local media on TV and radio (West channel and many local radio stations). It is important to use modern ways in a modern Industrial Park, if it is to have any impact on the minds of people.

16. Conclusion

At a time of crisis, such as the one our country is going through today, it is necessary to make full use of all available resources in the most effective way. Based on this logic, we consider that the Natural Sciences and Technology Museums in Greece are a large cultural and educational resource potentially available to the country, but nowadays is underutilized to a significant extent.

Unfortunately, our sample of interviews was limited to a limited number of employees and executives and we could not reach big names and stakeholders that would give their insight; people such as a mayor or president of hotel owners for example, whose opinion weighs significantly regarding this issue, but we find that SES Ptolemaida and AEVAL meet all the conditions for the implementation of an Industrial - Historical Park, nonetheless. This idea becomes even more feasible when someone considers that the facilities of SES Ptolemaida occupy a large area and are suitable to host a Park of international prestige.

The creation of an Industrial Park in Ptolemaida will signify a number of events and effects:

- Vital for the economy of the town and wider region,
- The Park is expected to greatly contribute to social and financial development of the area,
- Attracting new businesses will trigger the increase of job vacancies,
- Tourism emergence will be of utmost importance for prestige reasons as well,

- Promotion of cultural improvement, since the area will acquire fame due to its industrial heritage and last,
- The interventions to the surrounding area of the Park will provide an environmental upgrade to the landscape.

As a last remark, the introduction of an Industrial Park on Ptolemaida PPC, will be the first step for the next day in our region, according to our estimations. There are prerequisites, or at least they begin to shape, from the part of PPC and the part of the Town to encourage this activity.

17. Acknowledgements

I would like to thank dearly the following people who assisted me in the completion of this project:

- Dear friend Georgia Tsiogka, who provided tremendous help in writing and editing throughout the body of the paper.
- Dear Kostantinos Tzeprailidis and Violetta Nikolaidou, who gave valuable information about PPC (ΔΕΗ) and advised on the writing style of this project.
- Everybody from the town of Ptolemaida, who cared to answer our questionnaire about the prospect of a new Industrial Park.
- Dear professor Nikolaos Karachalis, who pushed to bring about the best out of this effort and helped me correct all wrongs.
- Dear professor Eleni Mavragani, who inspired me to write this subject after discussions about my hometown Ptolemaida.

18. Photo Gallery

Pic.1: powerplant of PPC, screenshot from:

https://www.youtube.com/watch?v=jRoEODUOcH8

Pic.2: SES Ptolemaida., screenshot from:

https://www.youtube.com/watch?v=jRoEODUOcH8

Pic.3: Internal unit space, screenshot from:

https://www.youtube.com/watch?v=jRoEODUOcH8

Pic.4: Generator, screenshot from:

https://www.youtube.com/watch?v=jRoEODUOcH8

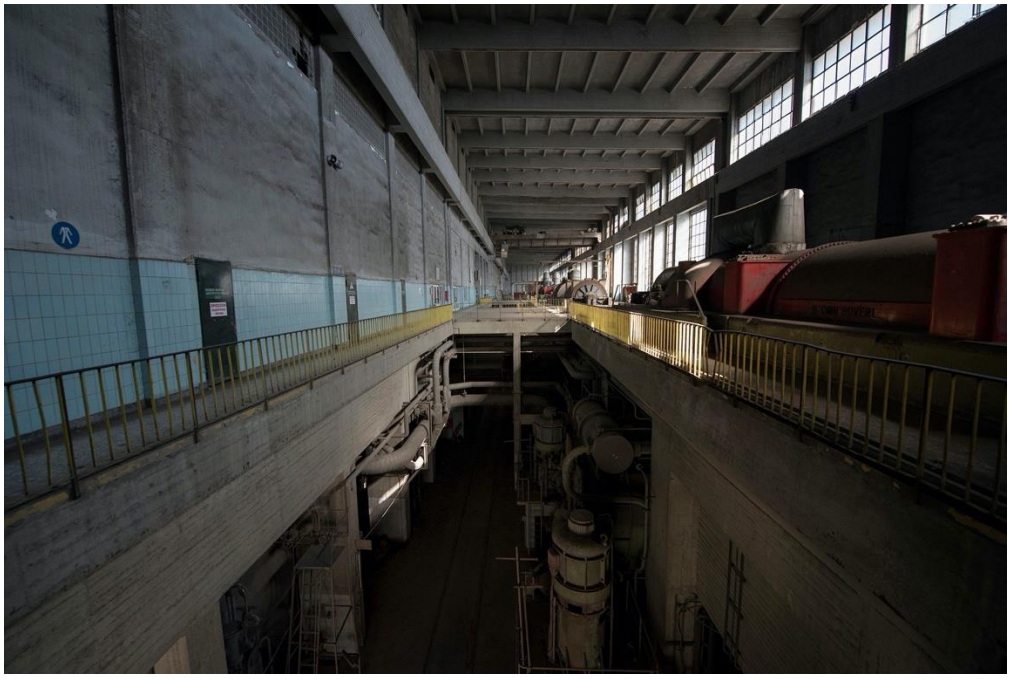
Pic. 5: Model, screenshot from: https://www.youtube.com/watch?v=jRoEODUOcH8

Pic.6: Generator, https://www.vice.com/gr/article/zmjmq5/o-sta8mos-ths-deh-sthn-ptolemaida-poy-mporei-na-ginei-h-warner-bros-ths-elladas

Pic.7: Cooling tower, https://www.vice.com/gr/article/zmjmq5/o-sta8mos-ths-deh-sthn-ptolemaida-poy-mporei-na-ginei-h-warner-bros-ths-elladas

Pic.8: SES Ptolemaida, https://www.vice.com/gr/article/zmjmq5/o-sta8mos-ths-deh-sthn-ptolemaida-poy-mporei-na-ginei-h-warner-bros-ths-elladas

Pic. 9: Lignite supply belt conveyor, https://www.vice.com/gr/article/zmjmq5/o-sta8mos-ths-deh-sthn-ptolemaida-poy-mporei-na-ginei-h-warner-bros-ths-elladas



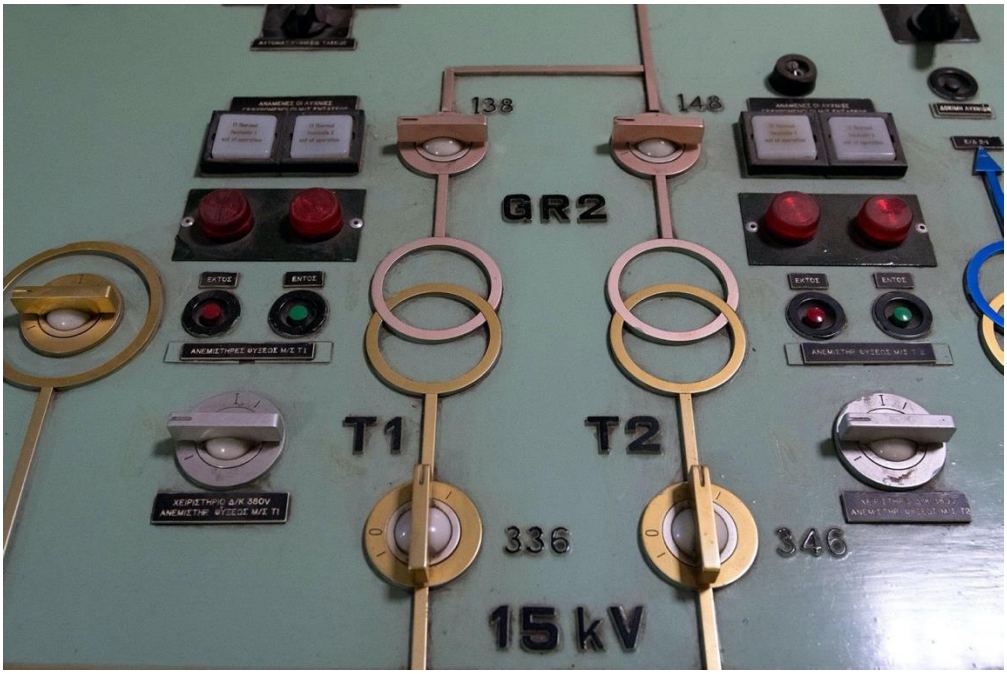
Pic.10: Generator area, https://www.vice.com/gr/article/zmjmq5/o-sta8mos-ths-deh-sthn-ptolemaida-poy-mporei-na-ginei-h-warner-bros-ths-elladas

Pic.11: Central Control Room for the Unit, https://www.vice.com/gr/article/zmjmq5/o-sta8mos-ths-deh-sthn-ptolemaida-poy-mporei-na-ginei-h-warner-bros-ths-elladas

Pic.12: Generator, https://www.vice.com/gr/article/zmjmq5/o-sta8mos-ths-deh-sthn-ptolemaida-poy-mporei-na-ginei-h-warner-bros-ths-elladas

Pic.13: Chimneys and Cooling Towers, https://www.vice.com/gr/article/zmjmq5/o-sta8mos-ths-deh-sthn-ptolemaida-poy-mporei-na-ginei-h-warner-bros-ths-elladas

Pic.14: Cooling Towers, https://www.vice.com/gr/article/zmjmq5/o-sta8mos-ths-deh-sthn-ptolemaida-poy-mporei-na-ginei-h-warner-bros-ths-elladas



Pic.15: Operation's elememts for the Unit, https://www.vice.com/gr/article/zmjmq5/o-sta8mos-ths-deh-sthn-ptolemaida-poy-mporei-na-ginei-h-warner-bros-ths-elladas

Pic.16: Cooling Tower interior, https://www.vice.com/gr/article/zmjmq5/o-sta8mos-ths-deh-sthn-ptolemaida-poy-mporei-na-ginei-h-warner-bros-ths-elladas

19. Bibliography – References

Anyfandi, G. (2009). *The science and technology museum as a "text": Educational and communicational analysis*. Unpublished Doctoral Thesis. Corinth: University of Peloponnese.

Dimopoulos, K. (2006). *Parallel evolution of science museums and education in Natural Sciences: Projections of a changing relationship between the experts and the public*. Minutes of the 3rd Panhellenic Convention of the Association for the Teaching of Natural Sciences "Teaching of Natural Sciences: Methods and Technologies for Learning" Volos: University of Thessaly. (pg. 773-779).

Dimopoulos, K. (2008). Informal teaching methods in the Natural Sciences, Teaching of Natural Sciences. Patra: Hellenic Open University. (pg. 9-47).

Dimopoulos, K., & Matsopoulos, N. (2008). *Amateur astronomy in Greece as a form of informal education: Historic and contemporary recording. Minutes of the 4th Panhellenic Convention for History, Philosophy and Teaching of Natural Sciences "The cultural component of Natural Sciences in Education". Patra: University of Patra*. (pg. 477-490).

Koliopoulos, D. (2005). The teaching approach of the Natural Sciences Museum. Athens: Metaichmio Publications.

Komninos N. (2010). Technology Cities. URENIO.

Michailidou, M. (2002). *Museums: Path and prospects towards 21st century. Interdisciplinary approaches in Museum Education.* Athens: Metaichmio Publications. (pg. 93-100).

Nakou, E. (2001). *Museums: Us, objects and civilization*. Athens: Nissos Publications.

Papadakis V., (2007). *Strategy of business: Greek and international experience*. Mpenou Publications. (pg. 324-334).

Saitakis A. (2006). Scientific Technology Parks: Their role in boosting Enterpreneurship and Prefectural Development. Economist Journal, KATHIMERINI, Issue 27.

Saitakis A. (2006). Endorsing the entrepreneurship in Prefectures: The role of the Scientific Technology Park of Creta (ΕΤΕΠ-Κ). Economist Journal, KATHIMERINI, Issue 31.

Nikou, Konstantinos. (2011). Energo. Town of Ptolemaida. Ptolemaida. Proposal for the Promotion of Industrial Heritage AEVAL (Jessica)

Avgouli, M. (1994). The first Greek museums and national identity. In F.E. Kaplan (ed.), Museums and the making of "ourselves". The role of the objects in national identity. Leicester: Leicester University Press. (pp. 246-265).

Bakouros Y. L., Mardas D. C., Varsakelis N. C. (2002). Science park, a high-tech fantasy? An analysis of the science parks of Greece.

Callon, M. (2004). Europe wrestling with technology. Economy & Society, 33(1), (pp. 121-134).

Dierking, L. D., Falk, J. H., Rennie, L., Anderson, D., & Ellenbogen, K. (2003). *Policy statement of the "informal science education" ad hoc committee*. Journal of Research in Science Teaching, 40(2), (pp. 108-111).

Felsenstein Daniel (1994). *University-related science parks: 'seedbeds' or 'enclaves' of innovation?* Department of Geography and Institute of Urban and Regional Studies, University of Jerusalem. Technovation, Volume 14, Issue 2, March 1994, (pp. 93-110).

Gower S., Harris F. (1995). Evaluating British science parks as property investment opportunities. Journal of Property Valuation & Investment, Vol. 14 No. 2, 1996, (pp. 24 – 37).

Hansson F., Husted K., Vestergaard J. (2005). *Second generation science parks: from structural holes jockeys to social capital catalysts of the knowledge society*. Technovation, Volume 25, 2005, (pp. 1039-1049).

Kotler, P. (1991). Marketing Management. Englewood Cliffs, New Jersey: Prentice-Hall, Inc.

Link A. N., Scott J. T. (2002). *U. S. Science Parks: The Diffusion of an Innovation and Its Effects on the Academic Missions of Universities*. Department of Economics, Dartmouth College, Hanover.

Murphy, B. (2004). *La definition du Musee. De la reference pour specialistes au role social*. Nouvelles de l' ICOM, 57, (pp. 2-3).

Phillimore J. (1997). Beyond the linear view of innovation in science park evaluation. An analysis of Western Australian Technology Park. Technovation 19 (1999) (pp. 673–680).

Premkamolnetr N. (1998). Collaboration between a technological university library and tenant firms in a technology park in Thailand New challenges for librarianship in a developing country Asian Libraries, Vol. 8 No. 12, 1999, (pp. 451-465).

RatinhoT. & Henriques E. (2010) The role of science parks and business incubators in converging countries: Evidence from Portugal. Technovation 30 (2010) (pp. 278–290).

Sakellariadi, A. (2008). Archaeology and Museums in the nation building process in Greece. In P. Aronsson and A. Nyblom (eds.), Comparing: National Museums, Territories, Nation-Building and Change. Linköping, Sweden: Linköping University Electronic Press. (pp. 129 - 142).

Sofouli, E., Vonortas S. Nicholas (2006). S&T Parks and business incubators in middle-sized countries: the case of Greece. 2 August 2006.

20. Websites – Weblinks

http://www.iasp.ws

http://www.ukspa.org.uk/

http://www.ptolemais.gr/maps.htm

https://e-ptolemeos.gr/pigi-anaptixis-i-viomichaniki-klironomia-tis-eordeas-schedia-epanachrisis-palion-ergostasion-parousiastikan-sti-bienale-architektonikis-astikis-apokatastasis/

https://e-ptolemeos.gr/th-moumoulidis-ne-sti-dimiourgia-sigchronou-viomichanikou-istorikou-parkou-gia-tis-ktiriakes-egkatastasis-tou-ais-ptolemaΐdas-ke-tis-aeval/

https://e-ptolemeos.gr/katholiki-antidrasi-stin-katedafisi-tis-viomichanikis-klironomias-tis-eordeas-stin-ektakti-siskepsi-pou-sigkalese-o-dimarchos-eordeas/

https://e-ptolemeos.gr/stop-sto-gkremisma-ergostasion-tis-dei-apetoun-dimotiko-simvoulio-ke-foris-tis-eordeas/

https://e-ptolemeos.gr/apetite-schediasmos-gia-tin-axiopiisi-tis-viomichanikis-klironomias/

https://e-ptolemeos.gr/t/ρεύμα-πολιτών-εορδαίας/

https://e-ptolemeos.gr/ston-ais-ptolema-das-to-viomichaniko-moyseio-tis-dei-ekei-tha-metaferthoyn-ta-michanimata-tis-liptol-poy-charaktiristikan-kinita-mnimeia/

https://e-ptolemeos.gr/kinita-mnimeia-charaktiristikan-michanimata-tis-liptol-kai-toy-ais-ptolema-das-ta-prota-21-antikeimena-gia-to-viomichaniko-moyseio/

https://www.youtube.com/watch?v=jRoEODUOcH8

https://www.ethnos.gr/ellada/8712_ptolemaida-metatrepoyn-ta-foygara-tis-dei-se-holigoyntiana-stoyntio

https://www.vice.com/gr/article/zmjmq5/o-sta8mos-ths-deh-sthn-ptolemaida-poy-mporei-na-ginei-h-warner-bros-ths-elladas

https://www.ert.gr/perifereiakoi-stathmoi/kozani/ptolemaΐda-syllogi-istorikon-stoicheion-kai-keimilion-toy-protoy-ergostasioy-tis-dei/